http://www.oldgamesitalia.net/

GEOS—One Year La… …r Thoughts with Software

RUN

THE COMMODORE 64/128 USER'S GUIDE

July 1987
A CWC/I Publication
U.S.A. $2.95
CANADA $3.95
U.K. £2.00

MAKING MUSIC WITH MIDI

Hardware Companions:

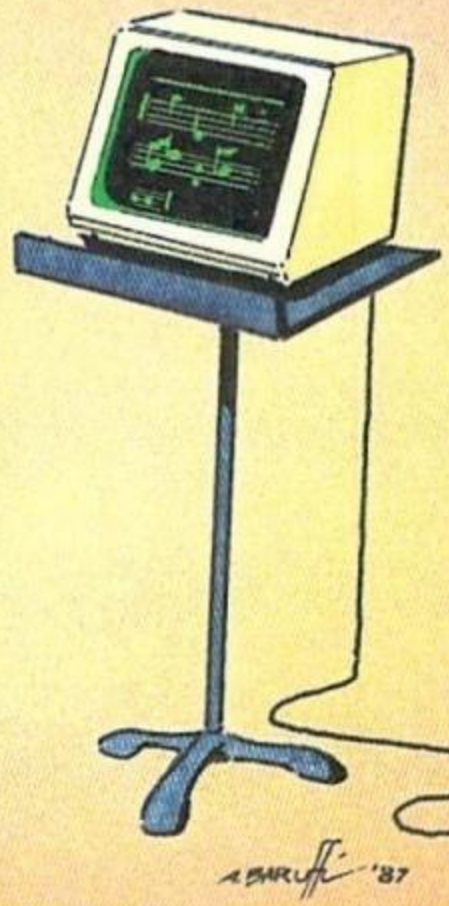
- Commodore's New Mouse
- RAM Expander
- FSD-2 Disk Drive

Program of the Month

- Attention, Shoppers!

Plus

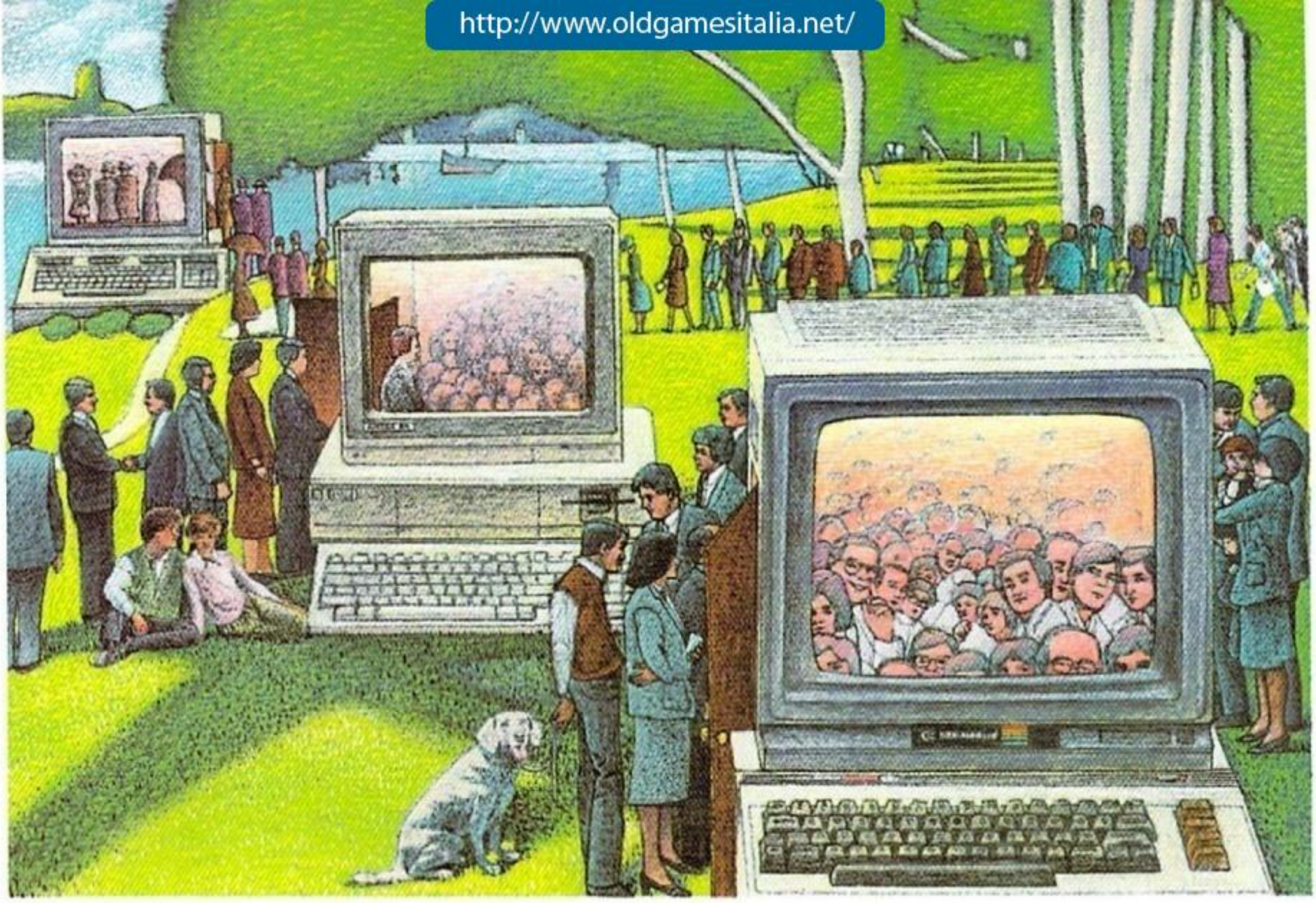
- C-128 Linker
- Input Sentry 64
- Tri-Solitaire
- Electronic Flash Cards



0 07
74470 12069

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/



USE THE BRAINS YOUR COMMODORE WASN'T BORN WITH.

Right at your fingertips in CompuServe's Commodore® Forums.

Our Commodore Forums involve thousands of Commodore users worldwide. These forums show you just how easy it is to get the most from your Commodore computer.

The Commodore Arts and Games Forum is for all Commodore 8-bit computers, concentrating on music, graphics, and games. The Commodore Communications Forum has updates of communications software. The Commodore Programming Forum supports programmers and developers of Commodore 8-bit computers. And the Amiga® Forum serves as the national resource for all business and entertainment applications in the Amiga community.

Easy access to free software, including free uploads.

You can easily download first-rate, non-commercial software and utility programs. Upload your own programs free of connect time charges. And take advantage of CompuServe's inexpensive weeknight and weekend rates, when forums are most active and standard online charges are just 10¢ a minute. You can go online in most areas with a local phone call. Plus, you'll receive a $25.00 Introductory Usage Credit when you purchase your CompuServe Subscription Kit.

Information you just can't find anywhere else.

Use the Forum Message Board to exchange mail with fellow members. Join ongoing, real-time discussions in a Forum Conference or communicate with industry experts. Scan Forum Data Libraries for non-commercial software. Enjoy other useful services too, like electronic editions of popular computer magazines.

All you need is your Commodore computer (or almost any other personal computer) and a modem.

To buy your Subscription Kit, see your nearest computer dealer. Suggested retail price is $39.95. To receive our free brochure, or to order direct, call 800-848-8199 (in Ohio and Canada, call 614-457-0802). If you're already a CompuServe subscriber, type GO CBMNET (Commodore Users Network) at any ! prompt to see what you've been missing.

CompuServe®

Information Services, P.O. Box 20212
5000 Arlington Centre Blvd., Columbus, Ohio 43220

800-848-8199

In Ohio, call 614-457-0802

An H&R Block Company

Circle 64 on Reader Service card.

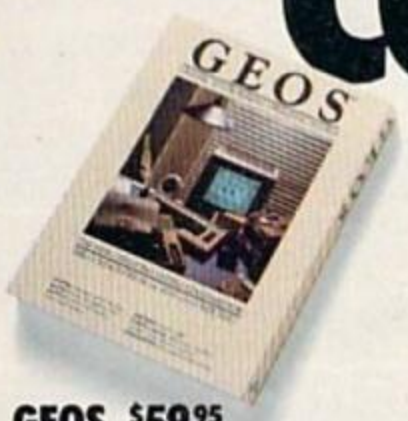
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Circle 134 on Reader Service card.

STOP PLAYING AROUND WITH YOUR COMMODORE.



GEOS $59.95

The Graphic Environment Operating System that opens up a whole universe of new possibilities for C64's and 128's. With geoWrite, geoPaint, fast-loading diskTurbo and support for all GEOS-compatible applications.
*Also available for 80 col. C128's.

FONTPACK 1 $29.99

A collection of 20 more fonts for use with GEOS applications, in various shapes and sizes for more expressive and creative documents.

GEODEX $39.95

The GEOS-compatible directory that allows you to create lists by name, address, phone number, etc. Includes geoMerge to customize form letters and invitations.
*Also available for 80 col. C128's.

WRITER'S WORKSHOP $49.95

All the GEOS-compatible tools a writer needs, including geoWrite 2.0 with headers, footers and features to justify, center, search and replace text. Includes a Text Grabber (for converting from programs like Paper Clip), geoMerge and LaserWriter printing capability.
*Also available for 80 col. C128's.

DESKPACK 1 $34.95

Four GEOS-compatible applications: Graphics Grabber for importing art from Print Shop,™ Newsroom™ and Print Master™ graphics; Calendar; Icon Editor and Black Jack Dealer.
*Also available for 80 col. C128's.

GEOCALC $49.95

The GEOS-compatible, number-crunching spreadsheet for tracking and analyzing numerical data. Create your own formulas, perform calculations for anything from simple geometry to "what if" cost projections.
*Also available for 80 col. C128's.

GEOFILE $49.95

The GEOS-compatible database manager that sorts, edits and prioritizes whatever data you feed it. You fill out the "input form," specify your command, and geoFile takes it from there.
*Also available for 80 col. C128's.

GEOPRINT CABLE $39.95

The six-foot cable that speeds up printing because it's parallel—not serial. Connects easily to C64's and C128's with fewer wires and no interface box.

Sooner or later, you're going to discover that there's more to C64's and C128's than fun and games.

You're going to discover power.

Not the kind of power that blasts aliens out of the galaxy. But the kind that whips through boatloads of data in seconds. The kind that crunches numbers and drafts documents like child's play.

The kind you find in GEOS.

Every GEOS application can take C64's and C128's from "mastering the universe" to a university master's degree, with all kinds of advanced capabilities that function at hyperspeeds you never imagined possible.

So if you're tired of toying with technology, try playing around with GEOS. Once you feel its power, you'll know that for anyone who still thinks Commodores are toys, the game's over.

Berkeley Softworks

The brightest minds are working at Berkeley.

To order call 1-800-443-0100 ext. 234

(California residents add 7% sales tax.) $2.50 US/$5.50 Foreign for shipping and handling. Allow six weeks for delivery.

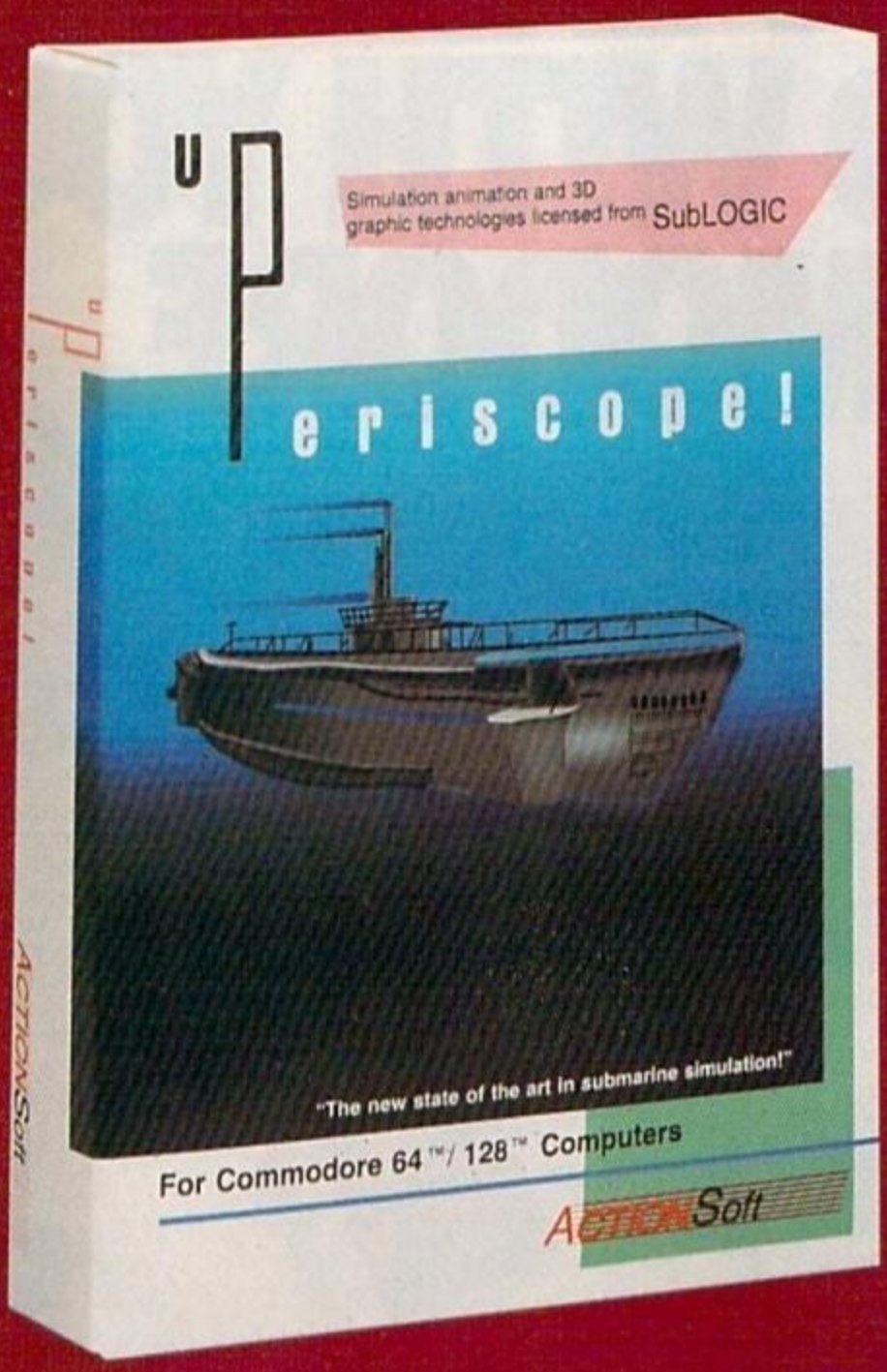
rademarks of Commodore Electronics, Ltd. GEOS, geoWrite, geoPaint, geoCalc, geoDex, geoMerge, ge
enames of Berkeley Softworks. Print Shop, Print Master, Newsroom and Paper Clip are tradenames of c

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

WE'VE BLOWN THE COMPETITI


up
periscope!
Simulation animation and 3D graphic technologies licensed from SubLOGIC
"The new state of the art in submarine simulation!"
For Commodore 64™/ 128™ Computers
ACTION Soft

Up Periscope!, the new state of the art in submarine simulation! Blowing the competition out of the water with superior combat strategy and tactics courtesy of Captain John Patten, USN (Ret.). With true animated 3D graphics courtesy of SubLOGIC. Up Periscope!, generations ahead of the pack!

- $29.95 -
Better Engineering at a Better Price

Compare hits for yourself!

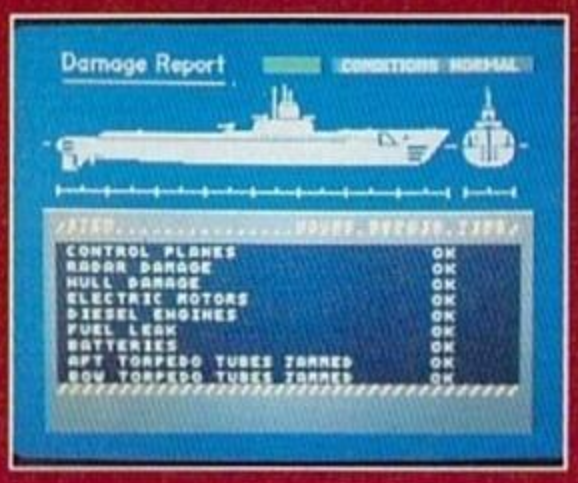
		Up Periscope!	Silent Service
Fire 1	Suggested Retail Price	$29.95	$34.95
Fire 2	3-Dimensional Graphics	Yes	No
Fire 3	Number of Scenarios	6	3
Fire 4	Split-Screen Views	Yes	No
Fire 5	Reality Levels	11	7
Fire 6	Radar Screen	Yes	No
Fire 7	Accu-Sound™ realism	Yes	No
Fire 8	Torpedo Types	3	1
Fire 9	Auto or Manual Torpedo Launch	Yes	Yes
Fire 10	Time-Day-Month-Year Selection Capability	Yes	No
Fire 11	Zoom Feature	Map or Ship Views	Map View Only
Fire 12	Submarine Strategy & Tactics Manual by John Patten, Capt. USN (Ret.)	Yes	No
Fire 13	Auto-Load Feature on C128	Yes	No
Fire 14	Joystick Required	No	Yes

Circle 188 on Reader Service card.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

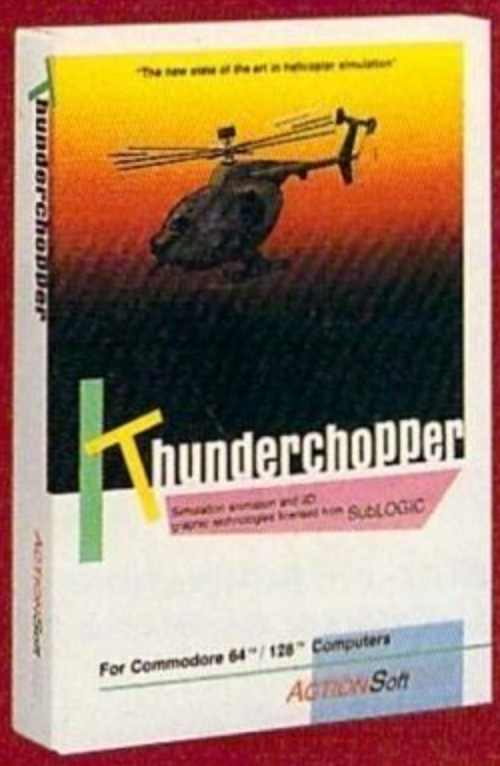
http://www.oldgamesitalia.net/

ON RIGHT OUT OF THE WATER!



ThunderChopper

And don't forget ThunderChopper! For true helicopter action and realism, nothing else even comes close. ThunderChopper incorporates the most advanced graphics, flight systems, and game-playing factors to provide a sensational balance of strategy and fun.


"The new state of the art in helicopter simulation"
Thunderchopper
Thunderchopper
Simulation animation and 3D graphic technologies licensed from SubLOGIC
For Commodore 64™ / 128™ Computers
ACTIONSoft

See Your Dealer...
Or write or call for more information. Up Periscope! and ThunderChopper are available on disk for the Commodore 64/128, Apple II, and IBM PC line of personal computers for the suggested retail price of $29.95. For direct orders please specify which computer version you want. Include $2.00 for shipping (outside U.S. $6.25) and specify UPS or first class mail delivery. Visa, MasterCard, American Express, and Diners Club charges accepted.

© 1987 ActionSoft Corporation
3D graphics and special effects courtesy SubLOGIC Corp.
Commodore 64 and Commodore 128 are trademarks of Commodore Electronics Ltd.
Apple II is a trademark of Apple Computer, Inc.
IBM is a registered trademark of International Business Machines Corp.

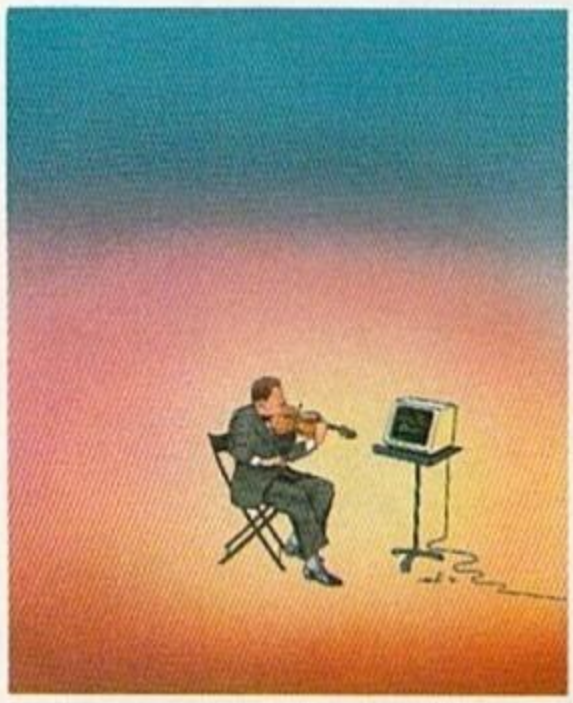
ACTIONSoft
"GENERATIONS AHEAD IN STRATEGY/ACTION SOFTWARE"
201 WEST SPRINGFIELD AVENUE. SUITE 711
CHAMPAIGN, IL 61820 (217) 398-8388

Circle 188 on Reader Service card.
http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

JULY 1987
VOLUME 4, NUMBER 7

CONTENTS



COVER ILLUSTRATION BY ANDREA BARUFFI

FEATURES

MAKING MUSIC WITH MIDI *by David Brooks* **38**
MIDI technology is expanding the electronic music-making horizons of professional and amateur musicians alike. With a C-64 or a C-128, you can join the MIDI scene.

NEW COMPANIONS FOR THE C-64 *by Tim Walsh and John Premack* **44**
The C-64 is alive and kicking, as evidenced by three new hardware accessories that add to its power. The 1351 mouse and the 1764 RAM expander from Commodore and the FSD-2 disk drive from Emerald Components all get high marks from our reviewers.

* **OUTLINING YOUR THOUGHTS** *by John Premack* **50**
Now you can use your Commodore to organize your thoughts as well as edit your words. Thought processors are a new kind of software that help you outline your ideas prior to writing.

* **TRI-SOLITAIRE** *by Jim and Deborah Chambers* **56**
Even veteran solitaire players will be challenged by this C-64 variation on the game.

* **ATTENTION, SHOPPERS!** *by Bob Kodadek* **60**
If you dread going to the supermarket, take heart! Shopping will be a breeze when you've prepared ahead of time with our C-64 and C-128 Shopping List program.

GEOS ONE YEAR LATER *by Dennis Brisson* **64**
As GEOS reached its first anniversary, *RUN*'s editor-in-chief spoke with Berkeley Softworks president Brian Dougherty about the past, present and future of his product. As you'll see, things are looking good.

* **LINKER 128** *by Dale Brown* **72**
Programmers will applaud this substitute for a C-128 Append command.

* **INPUT SENTRY** *by Robert Senft* **76**
Add the Super Input subroutine to your programs and say good-bye to data-entry problems.

DEPARTMENTS

RUNNING RUMINATIONS **8**
A shake-up at Commodore; *RUN*'s new technical manager and *RUN*'s new look.

MAGIC *by Jim Borden* **12**
The original column of hints and tips for performing Commodore computing wizardry.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

NEWS AND NEW PRODUCTS **16**
Recent developments and releases in the world of Commodore computing.

MAIL RUN **22**
Input from our readers.

SOFTWARE GALLERY **26**
Reviews of:

- The Pawn
- Symbol Master
- Fairlight
- Warship
- The Movie Monster Game
- The Toy Shop
- Moebius
- Moonmist
- Accountant, Inc.

* **EASY APPLICATIONS** *by Barbara Schulak* **81**
Short but useful applications for your Commodore computer. This month: a flash-card program youngsters—or adults—can use for practicing arithmetic skills.

TELECOMPUTING WORKSHOP *by David Bradley* **84**
Advice and answers to your questions on modems, terminal programs, bulletin boards, and more.

RESOURCE CENTER *by Margaret Morabito* **86**
Creating a computer storybook can be educational for your child and fun for you.

COMMODORE CLINIC *by Jim Strasma* **88**
Got a problem or question related to Commodore computing? This monthly column provides the answers.

HOW TO TYPE *RUN* LISTINGS **90**
Using *RUN*'s Perfect Typist checksum program.

* **MEGA-MAGIC** *by Cameron Goodair* **92**
Tips and techniques that are bigger than Magic. This month: a pie-chart routine for *RUN*'s Ultra Hi-Res graphics program.

LIST OF ADVERTISERS **96**

COMING ATTRACTIONS **96**

*THIS ARTICLE CONTAINS A PROGRAM LISTING. THE PROGRAM IS ALSO AVAILABLE ON THE JULY-AUGUST RERUN DISK. SEE PAGE 49 FOR DETAILS.

RUN (ISSN 0741-4285) is an independent journal not connected with Commodore Business Machines, Inc. *RUN* is published monthly by CW Communications/Peterborough, Inc., 80 Elm St., Peterborough, NH 03458. Phone 603-924-9471. Second-class postage is paid at Peterborough, NH, and at additional mailing offices. Canadian second-class mail registration number is 9565. Subscription rates in U.S. are $19.97 for one year, $29.97 for two years and $41.97 for three years. In Canada, a one-year subscription is $39.97 in Canadian funds. In Mexico, the one-year subscription rate is $24.97, with U.S. funds drawn on a U.S. bank. Foreign subscriptions are $39.97 for one year, with U.S. funds drawn on a U.S. bank. Please inquire about foreign air mail subscription rates. *RUN* is nationally distributed by International Circulation Distributors. **Postmaster:** Send address changes to *RUN*, Subscription Services, PO Box 954, Farmingdale, NY 11737. (Send Canadian changes of address to *RUN*, PO Box 1051, Fort Erie, Ontario, Canada L2A 5N8.)

Entire contents copyright 1987 by CW Communications/Peterborough, Inc. No part of this publication may be printed or otherwise reproduced without written permission from the publisher. Programs published in this magazine are for the personal use of the reader; they may not be copied or distributed. All rights reserved. *RUN* makes every effort to assure the accuracy of articles, listings and diagrams published in the magazine. *RUN* assumes no responsibility for errors or omissions in editorial or advertising content.

PUBLISHER
STEPHEN TWOMBLY

EDITOR-IN-CHIEF
DENNIS BRISSON

TECHNICAL MANAGER
LOU WALLACE

MANAGING EDITOR/PRODUCTION
SWAIN PRATT

REVIEW EDITOR
BETH JALA

COPY EDITOR
PEG LEPAGE

NEW PRODUCTS EDITOR
HAROLD R. BJORNSEN

TECHNICAL EDITOR
TIMOTHY WALSH

ASSOCIATE EDITORS
JIM BORDEN; MARGARET MORABITO; JIM STRASMA

ART DIRECTOR
ROSSLYN A. FRICK

PRODUCTION/ADVERTISING SUPERVISOR
HOWARD G. HAPP

DESIGNERS
ANNE DILLON
ROGER GOODE

PRODUCTION ASSISTANT
RUTH BENEDICT

ASSOCIATE PUBLISHER/SALES MANAGER
STEPHEN ROBBINS

SALES REPRESENTATIVES
KENNETH BLAKEMAN
NANCY POTTER-THOMPSON

CLASS ADS
HEATHER PAQUETTE-EAST COAST
BRENDA BILLHEIMER-WEST COAST

WEST COAST SALES
GIORGIO SALUTI, MANAGER
3350 W. BAYSHORE ROAD, SUITE 201
PALO ALTO, CA 94303
415-328-3470

ADVERTISING COORDINATOR
SUE DONOHOE

SECRETARY
LAURA LIVINGSTON

MARKETING MANAGER
WENDIE HAINES

BUSINESS MANAGER
BARBARA HARRIS

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Re-ink ANY FABRIC RIBBON automatically for LESS THAN 5 CENTS with

MAC INKER™

Over 11,000 cartridges and spools supported!

MAC INKER

IMAGEWRITER I AND II	$42.00
UNIVERSAL (cartridge or spool)	$68.50
MULTICOLOR IMAGEWRITER	$80.00
MULTICOLOR ADAPTER ONLY	$40.00
Shipping (first unit)	$3.00

■ Lubricated DM INK EXTENDS PRINT-HEAD LIFE! Black, blue, brown, red, green, yellow, purple, orange - 2 oz. bottle $3.00; pint $18.50. Gold, silver, indelible and OCR inks available. Heat transfer MacInkers and ink available plus a complete range of accessories for special applications.

■ Top quality, GUARANTEED, double density ribbon cartridges and reloads available.

■ DEDICATED MACINKERS AVAILABLE FOR EXTRA LARGE OR SPECIAL CARTRIDGES.

MERCURY MODEM

$149.00

Shipping $4.00

*100% Hayes™ compatible! ■ 24 month warranty. ■ Status lights. ■ Speaker. ■ 300/1200 baud. ■ Call progress detection.

Quick Link communications software:

MS DOS and Macintosh	$29.95
with modem	$15.00
Cable	$15.00

*Hayes is a trademark of Hayes Microproducts.

A BUFFER AND A DATA SWITCH!

PROTEUS™

The "Siamese" Buffer

64K	$199.00
256K	$299.00
Cable	$10.00

shipping $4.00

■ Proteus directs two printers (working simultaneously) and frees your computer for other applications.

■ Now you can merge a form letter with your mailing list, set up one printer with letterhead, the other with envelopes, press "START" and RELAX while

PROTEUS DOES IT ALL– ALL AT ONCE!

■ Compact. ■ 2 parallel ports. ■ Multiple copy capability. ■ "Flexible Capacity" buffer for each port.

1986 "Best Buy of the Year" Award! – Computer Shopper

***SPECIAL OFFER:** For orders of $100.00 or more. Say you saw it in RUN and get a free keychain, beeper and flashlight combined! A $15.00 value!*

ORDER TOLL-FREE
1-800-547-3303
In Oregon (503) 626-2291 (24 hour line)

We are and always will be your

Computer Friends®

14250 N.W. Science Park Drive
Portland, OR 97229. Telex 4949559
Dealer Inquiries Welcome.

Circle 274 on Reader Service card.

And your Earls and Viscounts. If you've got royal ancestors, we have the noble software that can help you trace them down.

Family Roots and your Apple, Macintosh, IBM, Commodore, Kaypro, TRS-80,* and many others, offer individual and group sheets, charts, name indices, general search and text capabilities. Adapts to most disk drives, printers, and screens. You get more utility programs, plus lots of personal control. A comprehensive (new) manual is included.

Put up your dukes!

All for just $185.

Write or call today for more information and a free brochure.

Family Roots™

Quinsept, Inc.
P.O. Box 216
Lexington, MA 02173
(617) 641-2930

American Express, Visa, and MasterCard gladly accepted.

* *Trademarks for Apple Computer Inc., International Business Machines, CBM, Inc., Digital Research and Tandy Corp.*

Circle 220 on Reader Service card.

$ WIN THE LOTTO $

With Your Computer!

Forget random numbers. This program for home computers does an actual analysis of the past winning numbers. This amazing program will quickly provide you with all the data you need to predict which numbers will likely come up in subsequent drawings. All consistent lottery winners use some kind of system based on the past winners. Using the real power of your computer gives you a definite edge. It's menu driven and all you do is add the latest winners each week and the program does the rest in seconds. On screen or printer it shows hot and cold numbers, frequency, groups, sums-of-digits, odd/even, wheels numbers and more. No thick manual to read. It even has a built-in tutorial.

Ask your software dealer or call or write:

SOFT-BYTE
P.O. Box 556 F. Park
Dayton, Ohio 45405
(513) 233-2200

THE LOTTO PROGRAM is designed for all 6 & 7 draw lotto games (up to 49 numbers)!

DON'T PLAY LOTTO WITHOUT IT!

APPLE & M/S DOS IBM	24.95
COMMODORE & ATARI	21.95
TRS-80 & MOD III, IV	21.95
MACINTOSH (super version)	29.95

Please add $2.00 shipping/ handling. Fast service on charge cards. R

Circle 102 on Reader Service card.

PRESIDENT
JAMES S. POVEC

VICE-PRESIDENT/FINANCE
ROGER MURPHY

DIRECTOR OF OPERATIONS
MATT SMITH

EXECUTIVE CREATIVE DIRECTOR
CHRISTINE DESTREMPES

DIRECTOR OF CIRCULATION
FRANK S. SMITH

CIRCULATION MANAGER
BONNIE WELSH

DIRECT MARKETING MANAGER
PAUL RUESS

SINGLE COPY SALES MANAGER
LINDA RUTH

TELEMARKETING MANAGER
ELIZABETH R. KEHN

AUDITS AND STATISTICS MANAGER
CECILE GIGUERE

SPECIAL PRODUCTS MANAGER
VIVIAN MATTILA

DIRECTOR OF CORPORATE PRODUCTION
DENNIS CHRISTENSEN

TYPESETTING MANAGER
LINDA P. CANALE

TYPOGRAPHER
DOREEN MEANS

MANUFACTURING MANAGER
SUSAN GROSS

DIRECTOR OF CREDIT SALES & COLLECTIONS
WILLIAM M. BOYER

Manuscripts: *RUN* invites its readers to send contributions in the form of manuscripts with drawings and/or photographs to be considered for possible publication. The procedure for submitting an article is outlined in the *RUN* writer's guidelines, which you can obtain by sending a self-addressed, stamped envelope. All contributions, queries, requests for writer's guidelines and any other editorial correspondence should be directed to *RUN*, Editorial Offices, 80 Elm St., Peterborough, NH 03458; telephone: 603-924-9471.

Advertising inquiries: Send your correspondence to Advertising Offices, CW Communications/Peterborough, Inc., 80 Elm Street, Peterborough, NH 03458; telephone: 800-441-4403.

Subscription problems or address changes: Call 1-800-227-5782 (NY and Canadian residents, 1-800-732-9119) between 9 a.m. and 5 p.m. EST, Monday–Friday, or write to *RUN*, Subscription Department, PO Box 954, Farmingdale, NY 11737.

Problems with advertisers: Send a description of the problem and your current address to: *RUN*, 80 Elm Street, Peterborough, NH 03458, ATTN.: Barbara Harris, Customer Service, or call 1-800-441-4403.

Microfilm: *RUN* is available in Microform from University Microfilms International, 300 N. Zeeb Road, Dept. P.R., Ann Arbor, MI 48106.

Back Issues: *RUN* back issues are available for $3.50, plus $1 postage and handling from: *RUN*, Back Issue Orders, 80 Elm St., Peterborough, NH 03458. On orders of 10 or more back issues, there is a flat $7.50 shipping and handling fee. Quantities are limited, and we cannot guarantee that all back issues are available.

Problems with ReRUN: Address correspondence to ReRUN, 80 Elm St., Peterborough, NH 03458.

***RUN*'s BBS:** The Running Board is *RUN*'s reader feedback bulletin board, which you can call anytime, day or night, seven days a week for up-to-date information about the magazine, the Commodore industry and news and information of interest to all Commodore users. Call: 603-924-9704. The Running Board uses a standard protocol, 300 baud, one stop bit, no parity, full duplex and a word length of eight bits.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Circle 76 on Reader Service card.

A disk each month delivered to you...
packed with programs for your Commodore.

EIGHT PROGRAMS AND MORE ON EVERY DISK. What's the opposite of "downtime"? It's UPTIME, of course. Just imagine ... a disk each and every month, delivered right to your door and packed with programs for your Commodore.

We make it easy and inexpensive. You deserve value. At UPTIME we believe in value. That's why each month 30,000 people like you enjoy a disk full of programs and information.

Make your life easier! Get more from your computer. Organize your life and be more productive with **home management** programs. Expand your knowledge with **educational** programs. Relax and enjoy monthly **games** or **adventures.** Make using your Commodore a snap with helpful **tutorials** and handy **utilities.** It's terrific!

DISCOVER UPTIME. You deserve the best from your Commodore. Have the best and save the most with UPTIME.

Subscribe now and save.
You won't believe the low price! Satisfaction guaranteed or your money back. Make the very next disk yours. Fill in the coupon and return it to us, or simply call. We'll start your subscription immediately. For **immediate service,** call toll-free:

1-800-437-0033
anytime, day or night.

QUALITY PROGRAMS LESS THAN 60¢ EACH

NEW FOR ALL COMMODORE C64 AND 128 COMPUTERS

FROM **Volume 1, No. 1**

Flip 'Em ■ Brain Teasers ■ Shopping Lister ■ Video Phile ■ Calendar Creator ■ File Appender ■ Nom de Plume

I'LL BYTE!!! I'm a Commodore enthusiast who wants more. Please start my subscription to **UPTIME** immediately.

SAVE 60% **12** Disk Issues $69.95 ☐ **6** Disk Issues $49.95 ☐ **3** Disk Issues $29.95 ☐ **1** Disk Issue $11.95 ☐

(Add $2 per issue in foreign countries, except Canada and APO)

Name _____

Address _____

City _____ **State** ___ **Zip** _____

Type of Computer _____

☐ Payment enclosed. (Make checks payable to **UPTIME.**)

Bill my: ☐ Visa ☐ MC Exp. Date _____

Signature _____

Account No. _____

Send to:
UPTIME · PO Box 299
Newport, RI 02840
(401) 849-4925

B-7

http://www.oldgamesitalia.net/

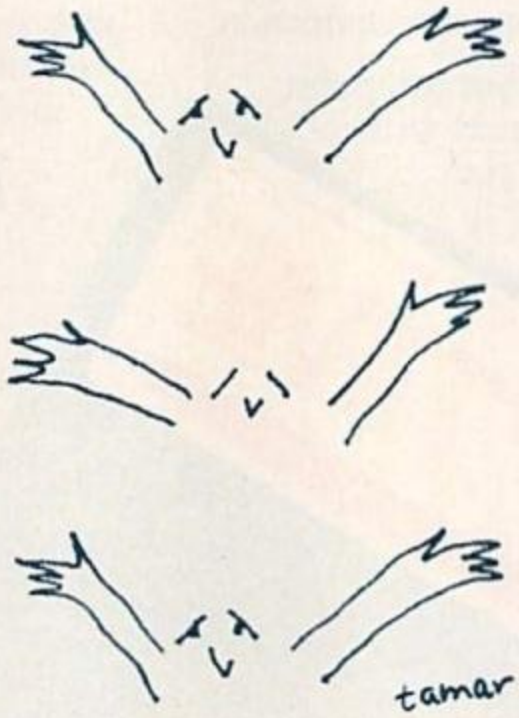
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

RUNning Ruminations

Good-by, Thomas and Nigel.

Hello, Irving, Alfred and Richard.



Coup de Commodore

The latest happenings at Commodore contain more intrigue than an episode of Dynasty.

By now we're probably all familiar with the story, which was carried in all the major newspapers: Chief Executive Rattigan and five senior managers (including General Manager Nigel Shepherd) at Commodore are ousted; 67-year-old chairman of the board, Irving Gould, takes over as CEO; Rattigan files suit; Gould brings in Alfred Duncan and Richard McIntyre (both former Commodore Canada officials) to fill the gaps; 50 employees are laid off at Commodore headquarters.

There's not much more to add. However, before we say good-by to Rattigan et al, let's credit them for returning the company to profitability after Commodore posted five consecutive quarter losses.

Looking to the future, let's hope that the reeling company is able to recover from its second major management shake-up in a year. Let's hope that this Canadian trio (Gould, Duncan and McIntyre) can boost Commodore's revenues, but that this sudden, melodramatic turn of events doesn't adversely affect Commodore's support to dealers and users in the form of products and service.

Welcome Aboard, Lou!

RUN magazine is pleased to announce that Louis Wallace has recently joined the magazine staff as technical manager. Wallace is well known in Commodore circles as a software developer, writer and speaker. Many of you are already familiar with Lou as the co-developer of the Ultra Hi-Res Graphics program (see *RUN*, February 1986), which tapped the undocumented high-resolution graphics capability of the C-128 in 80 columns. He is currently working on Basic 8.0, an enhanced version of Basic for the 128.

Or perhaps you know him as the graphics expert who hosts a monthly forum on QuantumLink. Or maybe you are familiar with his work as contributing editor of *Family Computing* and *AmigaWorld*, as well as a frequent contributor to *RUN*. He has had approximately 50 articles relating to Commodore computing published.

Wallace, who has years of computing experience and a valuable knowledge of the Commodore marketplace, will continue to write articles for *RUN*.

In his capacity as technical manager, Wallace will ensure the technical accuracy of the programs and articles published in *RUN*. He will also work with our authors in developing programs and articles for the magazine, oversee our special projects—the ReRUN disk, the special issues and our online bulletin board—and represent the magazine at computer shows.

Before joining the *RUN* staff, Wallace was a computer specialist and research chemist with the Veterans Administration Medical Center in Gainesville, Florida. He was also the charter president of the Gainesville Commodore Users Group.

We look forward to working with Lou and feel that our readers will quickly become aware of his contributions to the magazine.

A New Look

You recognize the name, but the look isn't the same. Well, don't panic. Your favorite computer magazine is indeed sporting a new look. Gone is the familiar *RUN* logo imposed on a set of computer keys.

It has been replaced by a bigger, cleaner, bolder logo to give the magazine more impact on the newsstand. The tag line under the logo now reads, "The Commodore 64/128 Users Guide." The substance hasn't changed; only the style.

You'll notice a different look in the articles and columns as well. The redesign eliminates many of the heavy black bars and opens up the page to give it a clean feel for easy readability.

As part of the redesign, we have also tightened up the text to get more words on the page.

You'll also notice that each author's bio contains a more personal profile of the writer. If you have questions or comments regarding an article, you are invited to write to the author in care of *RUN*.

The use of larger, bolder drop caps; repositioning some of the columns; and the use of different typestyles were all implemented to give the reader an uncluttered feel and create a strong visual impact. We hope our long-time readers, as well as new *RUN* purchasers, will feel comfortable with our new appearance.

We feel that our new look is well-tailored to our audience—authoritative, yet friendly—the same *RUN* you've been accustomed to for years. We hope you like the changes, which are not dramatic, but eliminate some of the design difficulties of the past.

Even though readers are sensitive to design, we still feel that content is more important than form. So if you like—or don't like—the new look, tell us. But more importantly, carefully examine our editorial coverage of Commodore's 64 and 128 computers. If we slip up, it's your responsibility to let us know about it.

Dennis Brisson

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

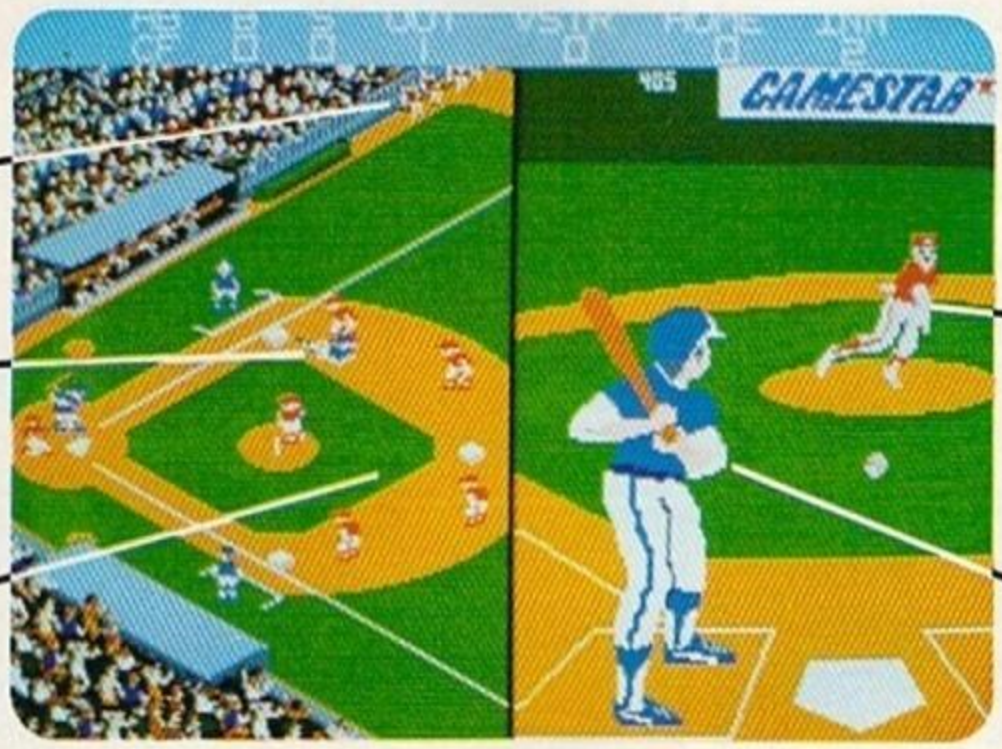
You Told Us What The Best Computer Baseball Game Would Have

"Great graphics"

"Relief pitchers —and subs"

"I like to slide —even head first."

"Let me see what's happening on the whole field."



"I want to play in the series!"

"I want to be able to throw a lot of different pitches."

"Put me right at the plate when I'm batting."

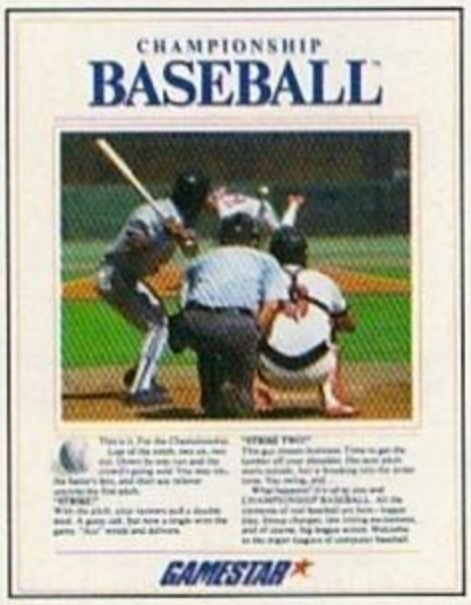
Here It Is.

CHAMPIONSHIP BASEBALL™

With 4 Divisions, 24 Teams, Playoffs and a Championship Series

You've been asking for the best in computer baseball games, and you want it *all*—graphics *and* features. We've heard you, and **Gamestar's** *Championship Baseball* delivers. No other product gives you the complete sport of baseball like *Championship Baseball:*

- Player Draft, complete with reserves.
- Setting your starting lineup.
- Batting Practice, Exhibition Game and League Play options.
- Each division is tougher than the last, so there's always a new challenge.

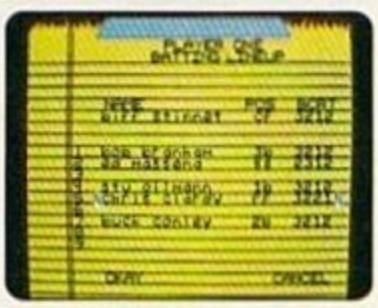


- You control all the action on the field—pitching (8 different pitches), hitting, catching, outfield relays, base running, even sliding under tags.
- Player substitutions can be made throughout the game.
- Division, playoff and championship series play.

All this and much more in the most complete baseball program available. When you're ready to step into the major leagues of computer baseball, Championship Baseball's your ticket. Nobody else gives you more.

For IBM PC, Tandy 1000, Apple IIe, IIc, Commodore 64/128, Amiga, Atari ST and 100% compatible computers.
To order, visit your local retailer or call 1-800-227-6900

Select your players from the talent pool, based on their characteristics and skill ratings. Name them after today's stars, or anyone you want.



Determine the batting order that will have the best chance against your opponent.

Batting window disappears when the ball's in play, so you can see continuous action.

GAMESTAR

Amiga screens shown; other systems may vary. Commodore 64, 128 and Amiga are trademarks of Commodore Electronics Limited.
IBM is a trademark of International Business Machines Corporation. Tandy is a trademark of Tandy Corporation. Atari and ST are trademarks of Atari Corporation. Apple is a trademark of Apple Computer.

Circle 5 on Reader Service card.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Don't Settle For Less...tcp

COMMODORE 128

$249.00

1571 Disk Drive $229.00

COMMODORE 64C

$159.95

Includes GEOS & Quantrum Link

1541C Disk Drive $169.95
1802C Monitor $199.00

COMMODORE 128 HARDWARE

1754 Ram Expansion
works with both C64 and C128 ..... $CALL

1351 Mouse $39.95

Commodore PC 10/1 ..... $599.00

Commodore PC 10/2 ..... $729.00

PC Compatibles from Commodore include Borland Sidekick Software

1901 Monochrome Monitor $109.00

AMIGA PACKAGES ..... $CALL

COMMODORE 128 PACKAGE DEAL $719.00

Includes: 1571 Disk Drive, Either Commodore 1902A or Magnavox 8562 Color Monitors, Box of Tussey Disks with Lifetime Warranty, and (2) Infocom Games; Zork II & Deadline

COMMODORE 64C PACKAGE DEAL $299.00

Includes: Enhancer 2000 Disk Drive, (2) Joy Sticks, and (2) Infocom Games; Zork III & Suspended.
w/Commodore 1802C Color Monitor $489.00

ENHANCER 2000

Full 1541C Compatibility Including GEOS
Excellent Reliability
$144.95

GAME GALLERY

Educational Software too!
All Games stocked for quick ship!!!

MISC GAMES

Championship Boxing	$17.95
Hobbitt	$24.95
International Hockey	$18.95

ACCESS

Leader Board	$29.95
Leader Board Tourn. Disk	$16.95

ACCOLADE

Ace of Aces	$23.95
Hard Ball	$22.95
Killed Until Dead	$CALL

ACTIONSOFT

Up Periscope	$24.95
Thunder Chopper	$24.95

ACTIVISION

Gamemaker Scifi Library	$15.95
Gamemaker Sports Library	$15.95
Garry Kitchen's Gamemakr	$24.95
GBA Basketball 2 on 2	$24.95
I am the 64	$21.95
I am the 128	$24.95
Little Computer People	$24.95
Shanghai	$26.95
Space Shuttle	$19.95

BRODERBUND

Lode Runner	$24.95

DAVIDSON & ASSOC.

Now in stock! Call for price on titles

DATA EAST

Commando	$24.95
Karate Champ	$26.95

ELECTRONIC ARTS

Age of Adventure	$12.95
America's Cup	$24.95
Amnesia	$29.95
Artic Fox	$24.95
Autoduel	$37.95
Bard's Tale	$32.95
Bard's Tale II	$29.95
Bard's Tale Clue Book	$10.95
Battlefront	$29.95
Carriers at War	$37.95
Chessmaster 2000	$26.95
Dan Dare	$16.95
Europe Ablaze	$37.95
Marble Madness	$23.95
Moebius	$29.95
Murder Party	$25.95
Music Construction Set	$12.95
PHM Pegasus	$27.95
Pinball Construction Set	$12.95
Road to Moscow	$29.95
Russia	$29.95
Seven Cities of Gold	$12.95
Starfleet I	$32.95
Touchdown Football	$22.95
Ultima I	$29.95
Ultima III	$37.95
Ultima IV	$45.95
World Tour Golf	$27.95

EPYX

500 XJ Joystick	$14.95
Championship Wrestling	$27.95
Movie Monster	$16.95
Street Sports	$29.95
Sub Battle	$29.95
Summer Games	$16.95
Summer Games II	$26.95
Super Cycle	$16.95
Winter Games	$27.95
World Games	$29.95
World's Greatest Baseball	$24.95
World's Greatest Football	$28.95
Create a Calender	$CALL

FIREBIRD

Elite	$22.95

INFOCOM

Hitchhiker's Guide	$22.95
Leather Goddesses	$24.95
Wishbringer	$25.95

INVISICLUE BOOKS FOR ANY INFOCOM GAME $6.95

MICROPROSE

Acrojet	$24.95
F-15 Strike Eagle	$21.95
Gunship	$24.95
Kennedy Approach	$24.95
NATO Commander	$24.95
Pirates	$25.95
Silent Service	$24.95
Solo Flight	$24.95

LANCE HAFNER for the best in sports strategy simulation

3 in 1 Football	$29.95
Basketball, the Pro Game	$29.95
Final Four Basketball	$29.95

Coming Soon ... Baseball !!!

MINDSCAPE

Fist	$19.95
Indiana Jones	$22.95
Infiltrator	$21.95
Parallax	$19.95
Perfect Score:SAT prep	$49.95
Star Trek Promethian Adv	$29.95
Uchi Mata	$19.95
Uridium	$26.95

Call for prices on other MINDSCAPE products!

SIMON & SHUSTER

Paper Airplane const.	$24.95
Spy Hunter	$19.95
Star Trek-Kobayashi alt.	$29.95
Typing Tutor III	$29.95

SUBLOGIC

Flight Simulator II	$32.95
Football	$37.95
FS II Scenery disk	$15.95
Jet	$29.95
Pure Stat Baseball	$37.95

C-64 BUSINESS AND PRODUCTIVITY

C-64 DATABASES

Bank Street Filer	$34.95
Consultant	$39.95
Data Manager	$19.95
Fleet Filer	$29.95
Profile 64	$36.95

C-64 INTEGRATED PKGS

Homepak	$39.95
Trio	$CALL
Vizastar 64 4K	$39.95
Vizastar 64 8K	$59.95

C-64 SPREADSHEETS

Calkit	$39.95
Swiftcalc 64 w/sideways	$39.95
Sideways	$19.95

C-64 WORD PROCESSORS

Bank Street Writer	$CALL
Font Master II	$34.95
Font Master 64	$34.95
Paperclip w/spellpack	$49.95
Pocket Writer Dictionary	$19.95
Wordpro 3+/64	$14.95
Word Writer 64 w/speller	$34.95

FINANCIAL & ACCT.

Timeworks Electr. Checkbk	$19.95
Timeworks Money Mgr	$19.95

GRAPHICS

Broderbund Print Shop	$25.95
Print Shop Companion	$22.95
Graphics Library I,II,or III	$16.95
120 sheet color paper refill 40 each red, blue, gold	$8.95
Clip Art I	$19.95
Clip Art II	$CALL
Graphics Scrapbk 1 or 2	$17.95
Newsroom	$34.95
Picasso's Revenge w/pen	$42.95

MISC. HARDWARE

Estes pwr supply for C-64	$54.95
Naverone 3 Slot expander	$27.95

UTILITIES

Certificate Maker	$32.95
Thinking Cap	$32.95
Certificate Library	$24.95
Toy Shop	$42.95
Holiday Pack	$16.95
Copy II 64/128	$24.00
CSM 1541 align	$34.95
Fast Load	$24.95
Merlin 64	$34.95

COMMODORE 128 SOFTWARE

WORD PROCESSOR

FLEET SYSTEM III w/spell & thesaurus	$CALL
FLEET SYSTEM 4	$56.95
Font Master 128	$44.95
Ghost Writer 128	$29.95
JANE	$32.95
PAPERCLIP II	$CALL
PERFECT WRITER	$CALL
SUPERSCRIPT 128	$59.95
TERM PAPER WRITER	$34.95
VIZAWRITE 128	$CALL
WORDPRO 128	$59.95
WDWRITER 128 w/spell	$49.95

SPREADSHEETS

EPYX MULTIPLAN	$39.95
PERFECT CALC	$CALL
SWIFTCALC 128 w/sdways	$49.95

DATA BASES

CONSULTANT	$39.95
DATE MANAGER 128	$CALL
FLEET FILER	$29.95
PERFECT FILER	$CALL
PROFILE 128	$59. 95
SUPERBASE 128	$CALL

MISC. 128 SOFTWARE

ACCOUNTANT INC	$69.95
DESK MANAGER 128	$34.95
I am the C128	$24.95
VIZASTAR 128	$CALL
MACH 128	$39.95
PARTNER 128	$54.95
PERSONAL ACCT.128	$34.95
SYLVIA PORTER'S personal finance planner	$54.95
Copy II 64/128	$24.00

tcp TUSSEY COMPUTER PRODUCTS

P.O.BOX 1006, STATE COLLEGE, PA 16804

http://www.oldgamesitalia.net/

Circle 209 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Ships it Federal Express

PRINTERS

star

PRICES ARE FALLING ON ALL STAR PRINTERS !!! PLEASE CALL FOR LATEST PRICES ON THESE MODELS: NX-10, NP-10, ND-10, ND-15, NX-15, NR-10, NB SERIES

EPSON

1 yr warranty

LX-86	$229.00
FX-86e	$359.00
FX-286e	$CALL

SEIKOSHA

2 yr warranty

SP-180 VC	$149.00
SP-1000 VC	$149.00
SP-1200 AI	$189.95

120cps, NLQ Mode

PANASONIC

2 yr warranty

1080i	$177.00
1091i	$229.00
1092i	$299.00
3131 Daisywheel	$CALL

PRINTER PACKAGES

ALL PRINTERS INTERFACE WITH C-64 or C128

star

NP-10 & XETEC Supergraphix Jr	$209.95
NX-10 & XETEC Supergraphix	$253.95
NX-10 & XETEC Supergraphix Jr	$237.95

PANASONIC

1080i & XETEC Supergraphix	$244.95
1080i & XETEC Supergraphix Jr	$229.95

SEIKOSHA

SP-1200 AI & XETEC Supergraphix	$244.95
SP-1200 AI & XETEC Supergraphix Jr	$229.95

XETEC

SUPER GRAPHIX
Interface w/8k buffer down loadable fonts $59.95
SUPER GRAPHIX JR
Printer Interface $42.95

Digital Solutions Inc.

Pocket Writer 2	$42.95
Pocket Filer 2	$42.95
Pocket Planner 2	$42.95
Digital Superpak	$74.95
Dictionary	$12.95

DISKS

per box of 10

BONUS DISKS

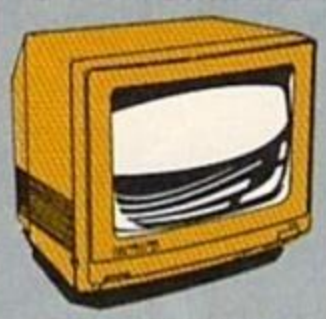
SS/DD	$6.45
DS/DD	$6.95

TUSSEY DISKS CLOSEOUTS !!!

SS/DD	$4.49
DS/DD	$4.99

Call for Price on Verbatim and Maxell Disks!!

RGB/COMPOSITE COLOR MONITORS FOR THE 128



COMMODORE 1902A
600 x 240 Resolution.
4 Operating Modes $269.00

MAGNAVOX 8562
600 x 240 Resolution.
3 Modes. 2 yr warranty $269.00

THOMPSON 4120
560 x 240 Resolution.
4 Modes. 1 yr warranty $249.00

All 3 monitors include cables to Commodore 128

Abacus

ALL TITLES IN STOCK !!
Call for price on all books and software titles

MODEMS

SHAREDATA	$36.95
VOLKS 6480 300/1200 baud	$CALL
1660	$CALL
COMPUSERVE STR KIT	$19.95
PLAYNET STARTER KIT	$14.95

MODEM MANIA

1670 MODEM $99.95
1200 Baud, w/Software
1660 MODEM $42.95
300 Baud, w/Software

NOW IN STOCK!! CALL TODAY!!

FEDERAL EXPRESS

Software orders over $50.00 will be shipped FEDERAL EXPRESS

(yes even at these prices). You only pay TCP's standard shipping charge of $4.00 per order. This offer also valid on peripherals and accessories under 8 pounds. Orders arriving before 11:00 AM our time will be shipped out same day. If part of your order is backordered the remainder will be shipped UPS Ground for FREE

Computerized order entry, processing and status allow TCP to serve you faster and better

To order by mail: We accept money order, certified check, personal check. Allow 2 weeks for personal check to clear.

Shipping: $4.00 for software and accessories/ $10.00 for printers and color monitors/ $8.00 for disk drives and other monitors/ Add $3.00 per box shipped COD. Call for other shipping charges. Additional shipping required on APO, FPO, AK, HI, and foreign orders.

Terms: ALL PRICES REFLECT CASH DISCOUNT, ADD 1.9% FOR MASTERCARD OR VISA. All products include factory warranty. **ALL SALES ARE FINAL.** Defective items replaced or repaired at our discretion. Pennsylvania residents add 6% sales tax. Prices and terms subject to change without notice.

- Purchase orders are accepted from qualified corporations and institutions.
- No sales tax on orders outside of PA.
- Buy with confidence. We honor manufacturers warranty.
- We accept Mastercard, Visa, COD and mail orders.

VISA MasterCard

EDUCATIONAL AND CORPORATE ACCOUNTS

We offer a full line of services catering to you, including; quick turn-around, personal service, and the flexibility to serve your organizations needs. Credit Approval in 24 hrs for any organization with a good D&B rating. To reach our Educational and Corporate Sales Department directly, Call 1-800-533-1131. Inside PA Call 814-234-2236

CMS

General Acct System

includes: • General Ledger • Accts Receivable • Billing Statements • Accts Payable • Check Writing • Job Costing • Payroll

Pkg. Price for all Modules:

C128 version	$124.95
C64 version	$119.95

Berkeley Softworks

GEOS	$39.95
Geo Calc	$CALL
Geo File	$CALL
Geodex	$27.95
Deskpack	$22.95
Fontpack	$CALL
Writers Workshop	$33.95

OPEN: 9am-9pm M-Thur, 9am-6pm Fri, 10am-6pm Sat, Noon-6pm Sun EAST COAST TIME

CALL TOLL FREE 1-800-468-9044

tcp

INSIDE PA CALL 814-234-2236

http://www.oldgamesitalia.net/

Circle 209 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

MAGIC

Give your C-128's screen editor a cut-and-paste feature; play a word-scrambling game; speed up your C-64's cursor movements; make your screen titles fade in and out; and more. compiled by JIM BORDEN

$3F6 C-128 Partial Directories

When I want to print part of a disk directory that I've just loaded, I first enter the Renumber command, list the directory and delete any unwanted text. Then I print it out with OPEN4,4:CMD4:LIST. The only disadvantage is that the block count for the files will be incorrect.

—ADAM KAPLAN, ADDRESS UNKNOWN

$3F7 Cut-and-Paste C-128 Basic Editing

Modifying the C-128's screen editor with the line below enables your computer to "cut out" part of one program line and "paste" it into another. Type:

```
KEY 1,CHR$(27) + "P{5 CRSR LFs}KEY4,"
+ CHR$(34) + CHR$(13)
```

and press return. Now move the cursor to the character before the text you want to grab and press F1. Then move the cursor to the point you want to insert the text and press F4. The text will pop into place.

Keep in mind that the text you want to move cannot contain quotes, and it must start at column 6 or beyond to allow the KEY4," command to fit in front of the text.

—CONSTANTINO GROSSE, PHILADELPHIA, PA

$3F9 Basic-Blocks-Free Finder

If you need to know how much room is left on a disk while you're running a Basic program, just include this short subroutine. It should work with any Commodore computer. You'll have the answer along with the diskname almost instantly. Keep in mind that with double-sided disks formatted for the 1571 but being used in 1541 mode (or in a 1541 drive), the subroutine will show you only the blocks free on the single side.

```
10 REM BLOCKS FREE FINDER-J.R.CHARNETSKI
20 OPEN1,8,15,"I0:":OPEN8,8,0,"$0:"
30 FORJ=1TO18:GET#8,A$,B$:C$=C$+A$+B$
40 NEXT:CLOSE8
50 B=ASC(A$+CHR$(0))+256*ASC(B$+CHR$(0))
60 PRINT B;"BLOCKS FREE"
70 PRINT"ON DISK: ";MID$(C$,7,16)
80 PRINT#1,"UJ":FORZ=1TO1000:NEXT
90 CLOSE1:REM RETURN
```

—JOSEPH R. CHARNETSKI, DALLAS, PA

$3FA GEOS File Danger

Leaving a GEOS, GEOS Boot or GEOS Kernal file on the Desktop will prevent your C-64 from loading files properly, ►

TRICK OF THE MONTH

$3F8 C-64 Directory Name Array

The program below reads a disk directory, places each of the filenames into a one-dimensional array and prints out the filenames, using Basic code.

After you load and run the loader program, be sure to dimension a string array for the filenames as the first array in your program. Then call up the program with SYS828, which reads the filenames into the array with the number of files stored in location 254.

Here's an example of how to use the program, assuming the loader was run to poke the machine language into memory:

```
10 DIM A$(144):SYS 828:E = PEEK(254)
20 FOR C = 1TOE:PRINT A$(C):NEXT:END
```

The program quickly reads the names into the array. The names are actually stored in the "free" area at 49152 ($C000), so you can store the array without using any of Basic's memory.

```
10 REM C-64 DIRECTORY READER-MARK NEWTON
15 C=0:FORA=828TO1006:READ B:POKE A,B:C=C+
   B:NEXT
20 IF C<>22602 THEN PRINT"DATA ERROR..."
25 DATA 169,14,162,8,160,0,32,186,255,169,
   4,162,235,160,3,32,189,255,32,192
30 DATA 255,162,14,32,198,255,160,0,140,57
   ,3,132,250,140,56,3,165,48,133
35 DATA 254,24,165,47,105,7,144,2,230,254,
   133,253,169,0,133,251,169,192,133
40 DATA 252,160,1,32,207,255,166,144,240,1
   5,32,204,255,169,14,32,195,255
45 DATA 172,56,3,136,132,254,96,192,6,144,
   45,201,34,208,10,173,57,3,73,1
50 DATA 141,57,3,16,31,174,57,3,208,30,192
   ,32,208,22,160,0,165,250,145,253
55 DATA 132,250,24,165,253,105,3,144,2,230
   ,254,133,253,76,119,3,200,76,121
60 DATA 3,140,59,3,160,0,145,251,165,250,2
   08,14,160,1,165,251,145,253,200
65 DATA 165,252,145,253,238,56,3,230,250,1
   72,59,3,230,251,208,2,230,252,76
70 DATA 166,3,36,48,58,42
```

—MARK E. NEWTON, JAMESTOWN, IN

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

LEGACY of the ANCIENTS™

DUNGEON SLIME NEVER LOOKED SO GOOD

In most dungeon fantasy games, you can't really see the slime on the dungeon walls. Or watch monsters coming after you.

Introducing Legacy of the Ancients. It's a new fantasy role-playing adventure that offers the richest graphics ever seen in a fantasy game. And something more.

A dangerous quest at a furious pace. Dungeons, castles, and towns to explore. Puzzles. Gambling. Fighting. Magic. In short, everything you love about fantasy games. And lots of new things you've never seen before.

Flickering torchlight on moldy walls. Blood stains on a monster's teeth. Incredible graphic detail.

Explore 24 dungeon levels, each with a different look and challenge.

The displays in the Time-Space Museum can be doorways to new worlds.

Trek through vast wilderness areas. Talk to the locals. Some will want to help. Some are good to eat.

12 different towns. Pick up some magic spells. Stock up on weapons and armor. Rob the bank on your way out.

Master five different action games to win. Visit casinos for extra gold—or build up your character points in the combat-training centers.

HOW TO ORDER: VISIT YOUR RETAILER OR CALL 800-245-4525 FOR DIRECT VISA OR MASTERCARD ORDERS (IN CA CALL 800-562-1112). The Direct Price is $29.95 for the C-64 version. To buy by mail, send check or money order to Electronic Arts Direct Sales, P.O. Box 7530, San Mateo, CA 94403. Add $3 for shipping and handling ($5 Canadian). There is a 14-day, money-back guarantee on direct orders.

ELECTRONIC ARTS®

Circle 3 on Reader Service card.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

and it can also keep the master disk from booting. You can avoid this problem by never leaving a file on the Desktop when you close the master disk.

—ROBERT M. ROBY, WHITEMAN AFB, MO

$3FB BLOCKS REQUIRED

If you regularly fill up the space on your disks, then enter the line below for your computer. It will tell you how many blocks are required to save a program.

For the C-64 use:

```
X = PEEK(45) + 256*PEEK(46) - 2049:PRINT INT(X/254) + 1
"DISK BLOCKS REQ'D"
```

For the C-128 use:

```
GRAPHIC CLR:X = 58109 - FRE(0):PRINT INT(X/254) + 1
"DISK BLOCKS REQ'D"
```

For the C-64, X calculates the end of your Basic program and subtracts the starting address (2049) from it. The C-128 version is easier to calculate, since all of Bank 0 except 7427 bytes are available for program storage.

—JEFF ROSS, NEWARK, DE

$3FC WORD MIXER

Here's a short program that scrambles the letters in words and prints them out to use in a word game. Load and run the program and input up to 20 words from a selected topic. The scrambled words will be printed on one sheet of paper and the answers on the next sheet. The program should work with any Commodore computer/printer combination. However, for non-Commodore printers, you might have to use CHR$(95) in line 40. (Here's a challenge for you word wizards: Can you create an anagram program?)

```
Ø PRINT"{SHFT CLR}{4 CRSR DNs}{7 SPACEs}*
  WORD MIXER BY T J RYAN *"
1Ø INPUT "{4 CRSR DNs}{5 SPACEs}TOPIC";T$
2Ø INPUT "{CRSR DN} # OF WORDS";N:IFN>2ØTH
   ENPRINT"2Ø WORDS MAX!":GOTO2Ø
3Ø DIM B(3Ø),J$(N),L$(3Ø),W$(N)
4Ø FOR J=1TO2Ø:B$=B$+CHR$(95):NEXT
5Ø FORW=1TON:PRINT"{CRSR DN} WORD #";W;:IN
   PUT W$
6Ø L=LEN(W$):W$(W)=W$:FORK=1TOL:L$(K)=MID$
   (W$,K,1):B(K)=K:NEXT
7Ø FORK=1TOL:D=INT(RND(1)*L+1):E=INT(RND(1
   )*L+1):T=B(D):B(D)=B(E):B(E)=T:NEXT
8Ø FORK=1TOL:J$(W)=J$(W)+L$(B(K)):NEXT:NEX
   T
9Ø OPEN4,4:CMD4:REM SEND WORDS TO PRINTER
1ØØ PRINT SPC((8Ø-LEN(T$))/2);T$:PRINT
11Ø PRINT:PRINT:FORJ=1TON:PRINTSPC(3Ø-LEN(
    J$(J)));J$(J);"{2 SPACEs}";B$:PRINT:NE
    XT
12Ø FORJ=1TO61-2*N:PRINT:NEXT:FORJ=1TON:PR
    INT W$(J):NEXT
13Ø PRINT#4:CLOSE4
```

—T. J. RYAN, NORWOOD, OH

$3FD FASTER FRACTION ACTION

The program below converts terminating decimals into common fractions in lowest terms more quickly than Magic Trick $3B8 (p. 12, *RUN*, March 1987). It takes advantage of the fact that terminating decimal fractions can be reduced only by dividing by powers of 2 and 5. This saves the time of fruitless division by other integers. The program should work on all Commodore computers.

```
1Ø REM FAST COMMON FRACTIONS-B. HICKERSON
2Ø INPUT"GIVE ME A DEC. NO. ";N$
3Ø FORX=1TOLEN(N$)
4Ø IFMID$(N$,X,1)="."THENFLAG=1:D=X
5Ø NEXT:IFVAL(N$)=ØTHEN END
6Ø IF FLAG<>1THENPRINT N$:GOTO2Ø
7Ø L$=LEFT$(N$,D-1):R$=RIGHT$(N$,LEN(N$)-D
   )
8Ø T$="1":FORY=1TOLEN(R$):T$=T$+"Ø":NEXT
9Ø PRINT L$" "R$"/"T$" IN LOWEST TERMS IS:
   "
1ØØ R=VAL(R$):T=VAL(T$)
11Ø IFR/2=INT(R/2)ANDT/2=INT(T/2)THENR=R/2
   :T=T/2:GOTO11Ø
12Ø IFR/5=INT(R/5)ANDT/5=INT(T/5)THENR=R/5
   :T=T/5:GOTO12Ø
13Ø IFT/R=INT(T/R)THENT=T/R:R=R/R
14Ø R$=STR$(R):T$=STR$(T):R$=RIGHT$(R$,LEN
   (R$)-1):T$=RIGHT$(T$,LEN(T$)-1)
15Ø PRINTL$" "R$"/"T$:RUN
```

—BRYCE R. HICKERSON, CARMICHAEL, CA

$3FE C-128 ELECTRONIC STAMP PAD

This program draws any set of one to eight sprites on a high-resolution screen. Use a joystick in port 2 to position the sprite on the screen and press the fire-button to copy it to the screen. When you're finished, press the space bar to select another sprite, or select sprite 0 to exit the program. When prompted for the template name, enter the name of a binary file containing the desired sprite shapes.

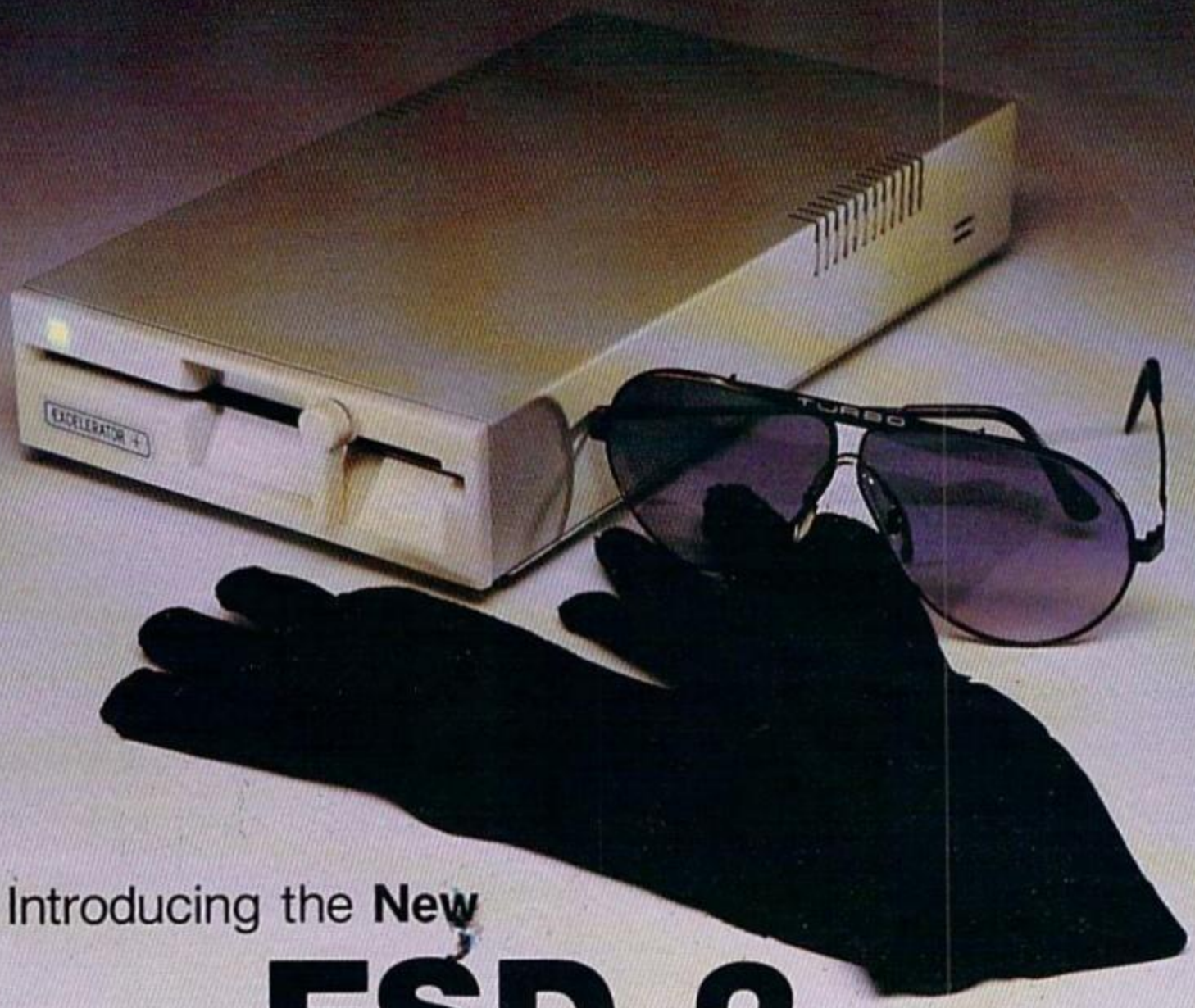
```
1Ø REM STAMPER 2/15-MATTHEW THIE
2Ø PRINT"{SHFT CLR}":GRAPHIC1,1:GRAPHICØ:D
   IRECTORY
3Ø INPUT "{CRSR DN}TEMPLATE NAME";TN$:BLOA
   D(TN$)
4Ø PRINT"{SHFT CLR}":E=4Ø: FORQ=1TO8: SPRI
   TEQ,1,7,1,Ø,Ø,Ø: MOVSPR Q, E, 5Ø:E=E+32
   :NEXT
5Ø PRINT"{3 CRSR DNs}{3 SPACEs}1{3 SPACEs}
   2{3 SPACEs}3{3 SPACEs}4{3 SPACEs}5{3 SP
   ACEs}6{3 SPACEs}7{3 SPACEs}8"
6Ø INPUT"{2 CRSR DNs}SPRITE NUMBER (1-8) Ø
    TO QUIT";SN:IFSN<ØORSN>8THEN6Ø
7Ø IF SN=ØTHENGRAPHICØ:FORU=1TO8:SPRITEU,Ø
   :NEXT:END
8Ø GRAPHIC1:SPRSAV SN,B$
9Ø IFJOY(2)=1ANDTY>ØTHENTY=TY-1Ø
1ØØ IFJOY(2)=7ANDTX>ØTHENTX=TX-1Ø
11Ø IFJOY(2)=5ANDTY<19ØTHENTY=TY+1Ø
12Ø IFJOY(2)=3ANDTX<31ØTHENTX=TX+1Ø
```

Continued on p. 91.

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Take a Quiet Drive in the Fast Lane.



Introducing the **New**

FSD-2

Excelerator+Plus

Commodore Compatible Disk Drive

Faster, quieter and more reliable than the 1541 and 1541C.
Breakthrough Direct Drive technology.
*Guaranteed 100% Compatibility. It even **enhances** GEOS!*
Full One-Year Warranty.

FOR DEALER INQUIRIES, CALL: 612-566-0330
First America Distributing, Inc.
Palmer Lake Plaza Bldg.
6860 Shingle Creek Parkway
Brooklyn Center, MINN. 55430

Manufactured by: **ECI** *Emerald Components International 541 Willamette Eugene, OR 97401 Fax: 503-345-5037 Telex: 23-499-6100 EUG SECSVC*

Circle 190 on Reader Service card.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

News and New Products

Among this month's new offerings are some clip-art graphics for GEOS and 21 public domain CP/M programs.

compiled by HAROLD R. BJORNSEN

New Clip-Art for GEOS

Diskart, a line of clip-art on three separately available disks, has been released for the GEOS graphics/text editor and operating system, which created the programs' hi-res graphics. The ready-to-use graphics for holidays, weather, geoPaint tips, music, U.S. maps and vehicles, among others, can be copied directly into geoPaint and geoWrite documents. Each disk is available for the C-64 for $8.50 from Those Designers, 3330 Lewis Ave., Signal Hill, CA 90807.

Check Reader Service number 400.

Cadpak Mouse Support

Abacus Software, publishers of the graphics design and drawing program, Cadpak, has enhanced that package to support Commodore's 1351 mouse. Technical support manager, Scott Allen, says that, "very few software packages are available to support the mouse, and Cadpak is one of the few packages for the Commodore that [does]."

The company states that if you've purchased Cadpak since February 1, 1987, you're entitled to a free upgrade to the mouse version. Earlier buyers of Cadpak may upgrade to the new mouse version for a nominal charge.

Dinner for 100,000, Please

If you enjoy cooking for one or a whole city, The Recipe Filer and Serving Converter program might help you. After you input the recipe information and the number of servings, the program tells you the amounts of ingredients you'll need to serve your guests. You can also file and recall recipes and view them on the screen or print them out. It's available for the C-64 for $9.95 from Microcraft, 9245 Washington, Brookfield, IL 60513.

Check Reader Service number 401.

The Sentry

In The Sentry, an action-adventure game from Firebird (PO Box 49, Ramsey, NJ 07446), you're stranded in a world with 10,000 landscapes to explore, the urgency of an ever-decreasing time element and a formidable opponent to deal with. Your only defense is a robot, which you use to battle the Sentry and her Landgazers to usurp her position as ruler of the alien landscape. The game is available for the C-64 for $39.95.

Check Reader Service number 402.

C-128 Disk Utilities

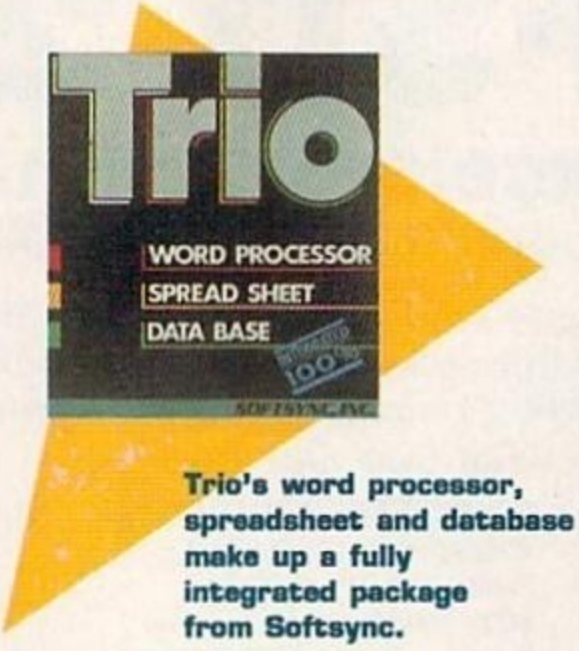
Super Disk Utilities, for the C-128 and 1571 disk drive, copies the contents of an entire disk, copies files, performs many CP/M and MS-DOS utility functions, edits any track or sector, scratches and unscratches files, changes a disk's format without affecting its data, and more. Super Disk Utilities retails for $39.95, and it's available from Free Spirit Software, 538 S. Edgewood, La-Grange, IL 60525.

Check Reader Service number 404.

Productivity Trio

Softsync (162 Madison Ave., New York, NY 10016) has released Trio, an integrated package for the C-128. It includes a word processor, spreadsheet and database program, all of which take advantage of the C-128's 80-Column mode. Trio is available for $69.95.

Check Reader Service number 405.



Trio's word processor, spreadsheet and database make up a fully integrated package from Softsync.

CP/M Programs For Your 128

CP/M Kit, a collection of public domain programs for the C-128's CP/M mode and the 1541 or 1571 disk drives, has been released by Innovative Computer Accessories (PO Box 789, Imperial Beach, CA 92032). With the 21 programs in this package, you can manipulate libraries, do word processing, use a modem and edit files, among other things. The booklet included in the package assumes no previous knowledge of CP/M on the part of the user. The retail price for the CP/M Kit was unavailable at press time.

Check Reader Service number 403.

Build Your Own Peripherals

Computer Peripherals That You Can Build, a revised, updated and expanded second edition, highlights state-of-the-art interfacing techniques and peripheral devices for the C-64. The 293-page book covers serial peripherals, digital peripherals with parallel output, parallel digital ports and analog signals and complete pinout diagrams of all integrated circuits used. There are new projects for a mouse, a bar-code reader, paddle-position readers, a trackball, an x-y plotter for data output and a drawing tablet. The trade paperback is available for $16.95 from Tab Books, Blue Ridge Summit, PA 17214.

Check Reader Service number 406.

Delta Man

A nuclear holocaust has destroyed Chicago, but you've survived because you discovered and used a robotic space suit and picked through the wreckage to find supplies, weapons and fuel. You ward off roaming bands of genetic mutants while searching for other surviving humans, until you can escape the city. Delta Man, an action-adventure for the C-64, is available for $19.95 from Cosmi, 415 N. Figueroa St., Wilmington, CA 90744.

Check Reader Service number 412.

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

You can use Timeworks' Partner 64 desktop accessory program while it temporarily suspends any other program in memory.

C-64 Desktop Accessory

Partner 64, a 64K, 40-column, cartridge-based desktop accessory program for the C-64, has been released by Timeworks (444 Lake Cook Road, Deerfield, IL 60015). It gives you eight memory-resident desktop accessories that operate concurrently with other programs. Accessories include an appointment calendar and datebook, memo pad, phone list and autodialer, name and address list, calculator, typewriter, label maker and envelope addresser. It's available for $59.95.

Check Reader Service number 409.

Mindscape Moves To Acquire HRW Assets

Mindscape, a publisher of software for the Commodore computers, has announced an agreement in principle with Holt, Rinehart and Winston to purchase most of the assets of the HRW education software unit, formerly known as CBS Interactive Learning. The proposed transaction marks the third acquisition within the last nine months for Mindscape, and, according to the company, makes it one of the largest educational software publishers in North America.

Fly the Jump Jet

Eurosoft International (114 East Ave., Norwalk, CT 06851), has released Jump Jet, a vertical take-off flight and combat simulator for the C-64. After selecting one of five skill levels, you lift the Jump Jet off the deck of an aircraft carrier to seek and destroy enemy aircraft with sidewinder air-to-air missiles. You are given audible warnings with the C-64's voice and sound capabilities. Once you've destroyed the enemy, you must relocate the aircraft carrier and attempt the difficult maneuver of landing the Jump Jet to successfully complete the mission and earn a promotion. It's available for $24.95.

Check Reader Service number 410.

Fix Your Own Computer

The Brady Guide to Microcomputer Troubleshooting & Maintenance, a step-by-step problem-solver and maintenance manual, has been published by Prentice Hall Press (One Gulf+Western Plaza, New York, NY 10023). The manual guides you in performing routine maintenance and money-saving repairs, familiarizes you with the computer's insides and describes ways to keep them working properly. Troubleshooting "road maps" detail the causes of most computer problems and suggest possible cures. If you find the problem is too complex for you, the manual explains what to expect from a professional service, so you won't spend money on unneeded work. It's available in trade-paperback format for $17.95.

Check Reader Service number 411.

Invoice Management

With Tisar 128, a database and invoice management system for small- and medium-size businesses, you can store up to 500 records on a disk, keep track of all your customer data on 14 fields and keep special invoice information in separate files on customer invoice disks. The system's Write/Edit mode lets you change and add information to files, search for data on any field, perform unlimited cross searches, sort results of any search and generate reports on bar-type monthly earnings graphs. Tisar 128 is available for the 128 at $69.95 from CW Data-Labs, 1632 Napfle Ave., Philadelphia, PA 19111.

Check Reader Service number 407.

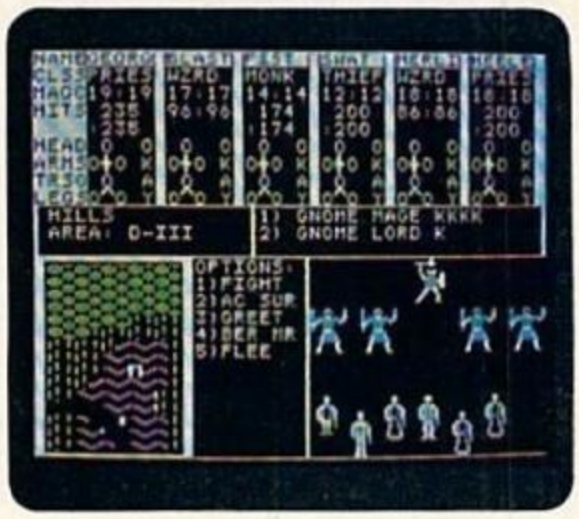
Find a Lover

The Love Quest, for the C-64, allows singles to meet other singles through a nationwide database. It also tells couples how compatible they are and how to improve their relationship. The Love Quest asks you 77 sex-related questions to derive information about your personality, such as sensuality, dominance, materialism, your sex drive and your ability to fall in love. The company will also match you up with some of the 20,000 individuals from around the country. The Love Quest retails for $59.95 and is available from Intracorp, 13500 SW 88th St., Miami, FL 33186.

Check Reader Service number 413.

Phantasie Sequel

Strategic Simulations (1046 Rengstorff Ave., Mountain View, CA 94043) has released Phantasie III: The Wrath of Nikademus, a multiple-character role-playing game sequel to its Phantasie adventure game series. This is the final confrontation between a band of adventurers and the Dark Lord Nikademus and his army of vile beasts and creatures.



Assemble a party of adventurers to destroy the Dark Lord in Strategic Simulations' Phantasie III: The Wrath of Nikademus.

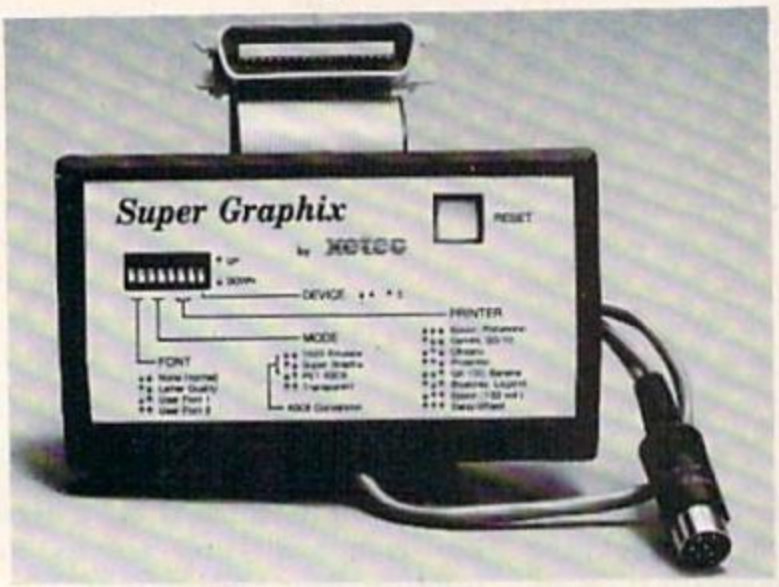
The game features more strategy and combat options, enhanced graphics, more magic spells, and increased playing speed as you travel across the wilderness or into dungeons. It's available for the C-64 for $39.95.

Check Reader Service number 408. ►

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Super Graphix



Includes: Utility Disk With 27 Fonts And Font Creator

GRAPHICS and FONTS plus an 8K BUFFER for the ultimate in performance and speed. The XETEC Super Graphix interface for Commodore Computers now offers a new high in technology with these features:

- 8K Buffer Standard
- 10 Printing Modes
- 3 Internal Screen Dumps
- Extensive Command Channel
- Reset Button to Halt Printing from Buffer
- Switch Settings on Label for Quick Reference
- Correspondence Quality Font Built-In
- Capable of Storing 2 Additional Fonts
- Correct Graphics/Text Aspect Ratio for all Major Printers
- 8 Active Switches with Changes Constantly Monitored
- Internal Fonts Support Super-script, Sub-script, Underlining, Bold-face and Choice of 9 Pitches

Suggested list $99.95 • Includes Lifetime Warranty

xetec, Inc. / 2804 Arnold Rd. / Salina, KS 67401 / 913-827-0685

Circle 96 on Reader Service card.

DUST COVERS

SATISFACTION GUARANTEED

★ CUSTOM MADE TO FIT
★ HEAVY 32-oz. VINYL ANTI-STATIC
★ EXTENDS EQUIPMENT LIFE
★ Choice of Colors Light Tan or Brown

COMPUTERS		PRINTERS	
C-64/Plus 4/C-64C	8.00	Seikosha SP-1000	13.00
C-128	13.00	Comrex 220	13.00
Datassette (C2N)	5.00	C'Itoh 8510	13.00
Amiga 1000	13.00	Juki 5510	13.00
(W/Amiga Mon. Stacked)	28.00	Imagewriter	13.00
Keyboard only	7.00	Epson JX 80	13.00
Atari 800XL, 130XE	10.00	Epson FX 85/185	13.00
Atari 520 ST	14.00	Okidata 92	13.00
IBM PC/XT	28.00	Citizen MSP 10	13.00
IBM 5051 Keyboard	8.00	C/DPS 1101	16.00
(Dimensions Required for IBM Clones)		Gemini 10 & Star 10's	13.00
		Gemini 15 & Star 15's	16.00
DISK DRIVES		Atari 1027	13.00
C-1541, C-1571	8.00	MONITORS	
Amiga 3½" D/Drv	8.00	Atari SC 1224RGB	19.00
Amiga 5¼" D/Drv	9.00	C-1702, BMC Color	16.00
Indust GT, MSD SD-1	8.00	C-1902/Amiga	19.00
MSD SD-2	10.00	Amdek 500-700	19.00
Enhancer 2000	8.00	CM-141 (C-1802)	19.00
FSD-1	8.00	C-1902A/Magnvx 40	19.00
Atari 1050	8.00	NEC (State Model)	19.00
		Magnavox 80 RGB	19.00
PRINTERS		Princeton (State Model	19.00
C-1525/MPS 801	10.00	Thompson CM 365-66	19.00
C-1526/MPS 802	13.00	Taxan (State Model)	19.00
C-MPS/803, C-1520	8.00	Sakata SC-100	19.00
Panasonic 1090/91	13.00	Zenith (State Model)	19.00
Okidata 120/192	13.00	VIDEO RECORDERS	13.00
Okimate 10/20	8.00	State Make & Model Dimensions required including clock cut-out	
Epson MX/FX/RX80	13.00		
Epson LX80/C-1000	13.00		

Order by stating MAKE, MODEL and COLOR CHOICE - TAN or BROWN with check or money order plus $1.50 per item ($4.50 max.) shipping and handling Calif. Res. Include 6½ + local tax. APO, 2.00/item, Foreign 3.00/item

SPECIAL COVERS WILL BE MADE TO YOUR DIMENSIONS. SEND YOUR REQUIREMENTS FOR OUR LOW PRICE QUOTES.

Crown Custom Covers

24621 PAIGE CIRCLE DEPT. B
LAGUNA HILLS, CA 92653
(714) 472-6362

Can Your Computer Make **YOU** a **MILLIONAIRE?**

with

LOTTERY 64 or LOTTERY +4
YOUR NEXT TICKET
COULD BE WORTH MILLIONS

LOTTERY uses the raw power and storage of your computer to determine and refine the number selection methods that will win the various lottery games you play. Don't be limited to the one or two methods that other programs use, they might not work in your state. We don't believe there is a better system available than the "original" LOTTERY 64 & LOTTERY +4.

Join the growing list of winners using our system.

SPECIFY LOTTERY 64 (64/128) or LOTTERY +4 (PLUS 4)

To order, send $24.95 for each plus $3.00 postage and handling per order to: (Illinois residents add 6% sales tax) (Orders outside North America add $3.00)

VISA

C.O.D. orders call:
(312) 566-4647

SMS **Superior Micro Systems, Inc.**
P.O. Box 713 • Wheeling, IL 60090
Dealer inquiries welcome

Circle 194 on Reader Service card.

PRODUCTS

Defend the Seas in WWII

Up Periscope!, a submarine simulation with 3-D graphics, puts you in command of a WWII fleet-class submarine to patrol the Atlantic and Pacific theatres. You can relive 14 historical situations or go hunting for enemy craft with everything from Mark 10s to advanced, wakeless Mark 18 torpedoes. But watch out! You could get depth-charged or rammed by enemy craft. Up Periscope! is available for the C-64 for $29.95 from ActionSoft, 201 West Springfield Ave., Suite 711, Champaign, IL 61820.

Check Reader Service number 414.

Award-Winning Software

The Software Publishers Association Spring Symposium Excellence in Software Awards were handed out at the Claremont Hotel in Berkeley, California last March. Among the winners were several Commodore-related packages.

Broderbund Software's Toy Shop, a toy design and customizing package, garnered the awards for Best Creativity Program, Best Concept and Best New Use of a Computer. Another of its programs, Where in the U.S.A. is Carmen Sandiego?, an educational game, took away the awards for Best Primary Education Program and Best General Education Program.

GEOS 1.2, a graphics environment operating system from Berkeley Softworks, won the award for Technical Achievement. Leather Goddesses of Phobos, an interactive adventure game from Infocom, was awarded Best Software Packaging, and Chessmaster 2000, a chess game from Software Toolworks, won Best Entertainment Program.

No More Vague Computer Messages

Micro Detective, an automatic error detector for the C-64, contains information about every type of error your computer can throw back at you. Too often, you sit for long periods staring at your monitor screen, trying to decipher vague error messages. The automatic error detection shows and explains almost any error. No more Syntax error, but "Expected a comma"; or, instead of just Illegal Quantity Error, the error is highlighted along with a message, such as "Should be an integer in the range 1–255." Micro Detective is available for $49.95 from American Made Software, PO Box 323, Loomis, CA 95650.

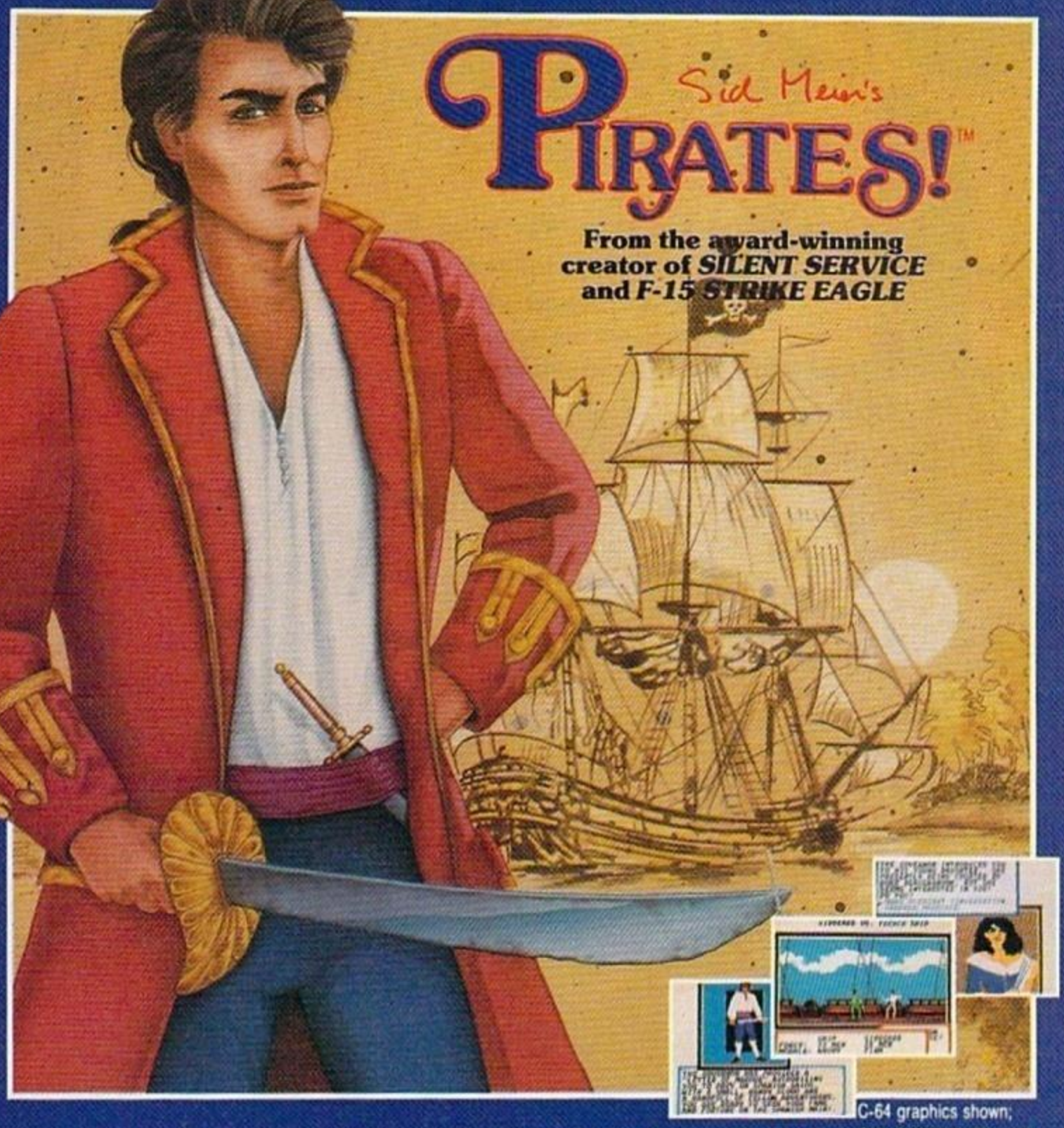
Check Reader Service number 415. ■

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

INTRODUCING The Adventure-Simulation... Action, Role Play, Drama And Intrigue... MicroProse PRESENTS



C-64 graphics shown; Actual screens may vary.

Join us, mate, for an expedition into one of the most fascinating eras of this millenium! **PIRATES!™** is an exciting new adventure-simulation that will challenge your skills while it captures your imagination!

You are cast in the leading role as privateer captain, criss-crossing the Spanish Main, slipping into ports as needs or opportunities require but always relishing your return to the freedom of the open seas!

PIRATES!™ is a unique blend of your favorite software gaming features all in one package. It weaves together the excitement of arcade-style action, the challenge of simulation decisionmaking, and the interactive storyline of a text-adventure. And, in the standard of all MicroProse software, **PIRATES!™** is designed to give you hundreds of hours of stimulating game play!

Pirates!™ features include:

- **ACTION...** ship battles, land conquests, fencing and sailing
- **STRATEGY...** plundering, trading, negotiating and forging alliances
- **GOALS...** treasures, romance, status, power and prestige
- **NEW EXPERIENCES...** explore across a map of the entire Caribbean
- **EXTENSIVE GRAPHICS...** over 70 different scenes and pictures
- **EXCITEMENT...** triumphs and tragedies, victories and defeats

PIRATES!™ is available from your favorite "Valued MicroProse Retailer" (VMR). Call us for the VMR nearest you!

MICRO PROSE
SIMULATION • SOFTWARE
120 Lakefront Drive • Hunt Valley, MD 21030 • (301) 771-1151

Versions planned for Commodore 64/128, IBM PC/PC Jr. and compatibles, Apple II+/c/e, and Atari XL/XE. Call MicroProse for specific machine availability. Suggested retail price only $39.95. Commodore, IBM, Apple and Atari are registered trademarks of Commodore Electronics Ltd., International Business Machines Inc., Apple Computer Inc. and Atari Inc., respectively.

Circle 103 on Reader Service card.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

1-800-331-7054

1-800-233-6345

COMPUTER VICE

NOW **COMPUTER VICE** JOINS WITH **S & S Wholesalers**

TO SAVE YOU MORE $$$ THAN EVER!

OUR ORDER LINES ARE NOW OPEN 24 HOURS A DAY, 7 DAYS A WEEK

OUR TECH-SUPPORT LINES ARE OPEN 8:00 AM - 8:00 PM

COMMODORE

C128	$249.90
64C	CALL
C64	$139.90
1571 Disk Drive	$239.90
1541 Disk Drive	$189.90
NEW 128D	$CALL
NEW 1581 Drive	$CALL
MPS 1200 Printer	$239.90
C1351 Mouse	$ 39.90
VIC 1525 Graphics Printer	$119.90
MPS 803 Printer	$109.90
VIC1520 Color Printer	$ 59.90
C1902 Monitor	$288.00

AMIGA

S & S IS COMMODORE AUTHORIZED SALES AND SERVICE FACILITY FOR AMIGA

AMIGA A1000 Color System	CALL
AMIGA 2000 Computer	CALL
A1080 Color Monitor	$369.90
A1050 256K Expander	$149.90
S & S 256K Expander	$ 99.90
A1010 Disk Drive	$239.90
A1020 Disk Drive	$199.90
A1300 Genlock Interface	$219.90
AMIGA Sidecar	CALL
2MB Memory Expander	$489.90
1680 1200BUAD Modem	$179.90
AMIGA Printer Cable	$ 18.90
3406 RF Modulator	$ 49.90

COMMODORE PC10
PC/XT COMPATIBLE

8088 Processor
8087 Co-Processor Slot
360K 5 ¼" Half-Height Floppy Drive
512K RAM Expandable To 640K
5 Expansion Slots
4 Drive Disk Controller
Serial and Parallel Port
ATI Graphics Card
8 Color, TTL Monochrome and Composite)
One Year Limited Warranty
MS DOS 3.2, GW Basic Included
Sidekick Utility Program Included

$799.00

PC10-2 **$899.00**

(Same As Above With 640K and 2 Floppy Drives)

PC10-HD **$1199.00**

(Same As PC10-1 W20MB Hard Disk and 640K)

PRINTERS

PANASONIC

KXP1080i	$229.90
KXP1091i	$279.90
KXP1092	$329.90
KXP1092i	$CALL
KXP1592	$CALL
KXP1595	$CALL
KXP3131	$249.90
KXP3151	$CALL

STAR MICRONICS

NX120D	$239.90
NX10-C	$239.90
ND10	$CALL
ND15	$CALL
POWERTYPE	$CALL

CITIZEN

MS120D	$219.90
MSP-10	$319.90
MSP-15	$419.90
MSP-20	$399.90
MSP-25	$529.90
PREMIER	$499.90

EPSON

LX	$239.90
FX86	$CALL
FX286	$CALL

SEIKOSHA

CALL FOR PRICING

INTERFACES

XETEC SR	$58.90
XETEC JR	$38.90
MICRO R/D	$59.90
G+	$37.90
SUPER G	$59.90
B+	$34.90

RIBBONS AVAILABLE
CALL FOR PRICING

OKIDATA
COLOR PRINTER
$124.90

MODEL OKIMATE 10

OKIMATE 20	$134.90
Plug N Print 10	$ 69.90
Plug N Print 20	$ 69.90
Color Ribbon	Call

30 DAYS ONLY

JUNE 15, 1987 - AUGUST 15, 1987

COMMODORE 128 COMPUTER

COMMODORE 1571 DISK DRIVE

$449.90

FREIGHT ADDITIONAL

SUPER SPECIALS

ZORK II	$ 6.77
ZORK III	$ 6.77
SUSPENDED	$ 6.77
DEADLINE	$ 6.77
STARCROSS	$ 6.77
QBERT	$ 6.77
FROGGER	$ 6.77
POPEYE	$ 6.77
JAMES BOND	$ 6.77

ANY 6 FOR $ 30.00

JOYSTICKS FROM $4.90

WICO BOSS	$10.77
WICO BAT	$14.77
WICO 3 WAY	$19.77
WICO BOMBAR	$29.77
KRAFT ACE	$ 4.90
KRAFT 8 WAY	$ 9.77
BIGSHOT II	$14.77
KRAFT KMC3	$29.97
WIRELESS SET	$34.90

DISK DRIVE CLEANING KIT **$6.90**

PRINT HEAD CLEANING KIT **$9.77**

CRT CLEANER **$9.77**

12" GREEN MONITOR
$69.90

NEC 1225 COLOR	$124.90
SAMSUNG 14"COLOR	$139.90
C1902A RGB COMP	$266.00
MAGNAVOX RGB	$299.90
GREEN TTL	$ 69.90

MODEMS

NOVATION CAT	$39.90
ANCHOR 300B	$49.90
C1600	$37.90
C1660	$54.90
C1670 1200B	$149.90
ANCHOR 1200B	$139.90
AVATEX 1200	$ 99.90

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

COMPUTER VICE now joins with S & S Wholesalers!

Join the celebration and SAVE, SAVE, SAVE.

S & S Wholesalers, Inc.

1-800-331-7054 ORDERS ONLY

CUSTOMER SERVICE - IN FLORIDA (305) 538-1364

FREE FREIGHT ON ALL ORDERS WITHIN CONTINENTAL U.S. OVER $100.00

Orders under $100.00 add $4.00 shipping and handling. C.O.D. orders add $4.00. Prices reflect a 3% cash discount. Add 3% for VISA/MC. (FPO, APO, Canadian & all other Postal Orders actual shipping charged.) Florida residents add 5% sales tax. Personal checks & money orders allow 2 weeks for processing. Prices subject to change without notice. **Orders received before 12:00 PM will be shipped same day.**

ABACUS

Assembler Monitor	$24.99
Basic 128	$39.99
Basic 64	$24.99
Cadpak 128	$39.99
Cadpak 64	$27.99
Chartpak 128	$27.99
Chartpak 64	$24.99
Cobol	$27.99
Forth	$26.90
Powerplan	$26.90
Quick Copy 2.0	$14.90
Super C Compiler	$39.90
Super Pascal	$39.90
T.A.S.	$39.90
Video Basic	$27.90
XPER	$39.90

ACCESS

Tenth Frame	$23.90
Mach 5	$22.90
Mach 128	$29.90
Leader Board	$23.90
Tournament Disk	$12.90

ACCOLADE

Ace of Aces	$17.90
Dam Busters	$17.90
Fight Night	$17.90
Hard Ball	$17.90
Killed Until Dead	$17.90
Law of the West	$17.90
PSI 5 trading co	$17.90
Spy vs Spy	$ 9.90

ACTIVISION

Alcazar	$18.90
Borrowed Time	$18.90
Comp. Hrwks Celebratn	$19.90
Countdown to Shutdown	$19.90
Fast Tracks Slot Car Const	$19.90
Gamemaker Scifi Library	$15.90
Gamemaker Sports Library	$15.90
Garry Kitchen Gamemakr	$24.90
GBA Basketball 2 on 2	$24.90
Ghostbusters	$23.90
Great Amer RR	$23.90
Hacker	$18.90
Hacker II	$23.90
I am the 64	$19.90
I am the 128	$23.90
Little Computer People	$24.90
Master of Lamps	$18.90
Mindshadow	$18.90
On Court Tennis	$20.90
Pitfall II, Lost Caverns	$16.90
Shanghai	$25.90
Space Shuttle	$18.90
Star Rank Boxing	$20.90

ACTIONSOFT

Call for price on all Actionsoft titles

BRODERBUND

Champshp Lode Runner	$24.90
Karateka	$19.90
Lode Runner	$24.90
Music Shop	$29.90
Print Shop	$25.90
LIB 1/2/3	$14.90
Companion	$24.90
Bank St. Writer	$32.90

DAVIDSON & ASSOC.

Now in Stock!

Call for Price on Titles

DATASAST

Commando	$23.90
Karate Champ	$25.90
Kung Fu Master	$25.90
Pole Position	$14.90

ELECTRONIC ARTS

Adventure	$23.90
Amnesia	$27.90
Artic Fox	$23.90
Autoduel	$36.90
Bard's Tale	$31.90
Bard's Tale II	$28.90
Bard's Tale Clue Book	$10.90
Chessmaster 2000	$25.90
Dan Dare	$15.90
Golden Oldies	$20.90
Hard Hat Mack	$12.90
Heart of Africa	$11.90
Mail Order Monsters	$10.90
Marble Madness	$22.90
M.U.L.E.	$10.90
Murder Party	$24.90
Music Construction Set	$12.90
Ogre	$27.90
One on One	$10.90
PHM Pegasus	$25.90
Pinball Construction Set	$12.90
Racing Destruction Set	$12.90
Reach for the Stars	$30.90
Road to Moscow	$28.90
Robot Rascals	$28.90
Russia	$27.90
Seven Cities of Gold	$12.90
Software Golden Oldies	$16.90
Starfleet I	$31.90
Touchdown Football	$21.90
Ultima I	$28.90
Ultima III	$36.90
Ultima IV	$44.90
Ultimate Wizard	$10.90
World Tour of Golf	$26.90

FIREBIRD

Elite	$21.90
Pawn	$26.90

INFOCOM

Bally Hoo	$28.90
Cut Throats	$21.90
Enchanter	$24.90
Hitchhiker's Guide	$21.90
Hollywood Hyjinx	$CALL
Infidel	$28.90
Leather Goddesses	$23.90
Moon Mist	$23.90
Planetfall	$24.90
Sorcerer	$28.90
Spellbreaker	$28.90
Suspect	$28.90
Trinity	$31.90
Wishbringer	$24.90

SUBLOGIC

Flight Simulator II	$32.90
Football	$37.90
FS II Scenery disk	$14.90
Jet	$24.90
Pure Stat Baseball	$36.90

MICROPROSE

Acrojet	$20.77
F15 Strike Eagle	$19.47
Conflict in Vietnam	$19.47
Gunship	$22.77
Silent Service	$24.77

SPRINGBOARD

Certificate	$29.90
Newsroom	$29.00
Clip Art I	$18.90
Clip Art II	$22.00

DIGITAL SOLUTIONS

Pocket Writer 64	$23.77
Pocket Writer 128	$28.77
Pocket Planner 64	$23.77
Pocket Planner 128	$28.77
Pocket Filer 64	$23.77
Pocket Filer 12	$28.77

PRECISION

Superbase 128	$52.77
Superbase 64	$47.77
Superscript 64	$47.77
Superscript 128	$52.77
Vizastar 128	$47.77
Vizawrite 128	$47.77
Bobs Term Pro 64	$47.77
Bobs Term Pro 128	$47.77

EPYX

Sub Battle	$23.90
Graphics Scrapbook	$23.90
Championship Wrestling	$23.90
Work Games	$23.90
Supper Cycle	$23.77
Summer Games	$23.90
Summer Games II	$23.90
Winter Games	$23.90
Fast Load	$23.90
Multiplan	$39.90
World Karate Champ	$17.90
Worlds Greatest Baseball	$22.90
Koronis Rift	$22.90
Eidolon	$22.90

TIMEWORKS

New Partner 64	$32.77
Sylvia Porter's Personal Finance	$39.90
Data Manager 128	$37.77
Swiftcalc 128 w/Sideways	$37.77
Wordwriter 128 w/Spell Check	$37.77
Partner 128	$37.77
All Four	$149.90
Data Manager	$27.77
Wordwriter	$27.77
SwiftCalc	$27.77
All Three	$139.77

Weekly Reader Sticky Bear Software

Now in Stock! Call for prices on titles.

AMERICAN COVERS

C128 COVER	$ 7.77
C64 COVER	$ 6.77
1571 COVER	$ 7.77
1541 COVER	$ 7.77
C1902 COVER	$14.77
MPS803 COVER	$ 7.77
MPS801 COVER	$ 7.77
MPS1200	$ 9.77
MPS1000	$ 9.77
VIC 1525	$ 9.77
AMIGA SYSTEM	$29.90
A1080 COVER	$14.77
AMIGA DRIVE	$ 9.77
C1802 COVER	$14.77
C1702 COVER	$14.77
OKIMATE	$ 9.77
SEIKOSHA	$ 9.77
EPSON	$ 9.77
EPSON 15"	$12.77

OTHERS AVAILABLE
CALL FOR PRICING

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

MAIL RUN

This month's Mail RUN includes letters about tax software, mail-in user's groups, the copy-protection controversy and more—plus a list of RUN *readers around the world who are looking for pen pals.*

TAX SOFTWARE UPDATES

We certainly appreciate reviewer Joseph Shaughnessy's comments on our program, Tax Command Professional, in the April 1987 issue of *RUN*. We've tried to keep the program fast and flexible, and we are pleased that he recognized this.

I'd like to explain the "small bug" he encountered in Schedule W. Tax Command Professional compares the total business income with what you enter for yourself and assigns the difference to your spouse. This saves having to enter both spouses' business incomes. I assume that Mr. Shaughnessy moved to the spouse column before entering his own business income. As he notes, he was able to correct the situation easily.

A number of your readers have asked about the availability of Tax Command Planner, briefly mentioned in the article. It's been extensively rewritten to reflect the new tax law and covers the new law from 1987 to 1996. Under the new law, tax treatment varies from one year to the next, with specific changes to rates and exemptions in the early years and changes reflecting inflation in the later years.

The new version of Tax Command Professional should be available by the time you read this issue of *RUN*.

—BRUCE R. THOMPSON
PRACTICAL PROGRAMS, INC.
PO BOX 93104
MILWAUKEE, WI 53203

I would like to commend Joseph Shaughnessy on his excellent review of income tax programs for Commodore computers in last April's issue of *RUN*. I'd also like to correct an error in the review. I have Swiftax/64 and was told by Timeworks that I can only update (for $25) once. After that, I must repurchase the software. This situation is not reflected in the article, which just says yearly updates are available for half the original price.

—M. TUCKER BRAWNER
SAVANNAH, GA

We contacted Timeworks. They said previous owners may purchase the 1987 version of Swiftax/64 for half-price, but will have to buy later updates at the full price.

—EDITORS

THE POWER OF RUN SCRIPT

Serendipity was at work recently when I purchased *RUN*'s Productivity Pak II disk. I ordered the disk to get the updated version of Mike Konshak's Datafile, which I've been using since it was first published in *RUN* several years ago. What I also got, unexpectedly, was RUN Script, which I find to be much better than the word processor I'd been using.

What especially delights me is the ease with which RUN Script can be customized, not only for one-time printing of a particular document, but in permanent formats for printing postcards and other non-lettersize documents. Its other great feature is its ability to use macros.

Robert Rockefeller has done a bang-up job!

—SI LABAR
BETHLEHEM, PA

MORE SHOTS IN THE SOFTWARE WAR

I read "The Software War" in the January 1987 issue of *RUN* and the letters in response to it in the April Mail RUN. I feel copy protection is a catch-22 situation. The companies charge too much for software, so pirates copy it, which takes away from the profits of the companies, so the companies raise their prices, which makes more pirates copy, and the companies proceed to lose more money . . .

If the solution were as simple as lowering prices, then the whole problem could be solved in short order, but lowering prices would start a chain reaction that would send companies straight into financial oblivion. Meanwhile, the honest user is getting ripped to shreds by software expenses.

If people would just stop pirating, prices could be lowered to a reasonable level, and we could be done with this controversy forever.

—MATTHEW LANDRY
ANN ARBOR, MI

I have no complaint about copy protection on games, but applications software should *not* be protected. Most software manufacturers state that they'll provide backup disks to registered owners for X dollars. The problem is that the companies go out of business or stop supporting old programs.

Two programs I use regularly were produced by firms that are now out of business. The programs came copy-protected, but I removed the protection as soon as I got them home.

When one of the original disks went west some time back, I did a three-minute copy back to it, and all is well again. If I hadn't had a backup disk, all the files I'd made with the program, and the hours of work that went into them, would have been lost.

I've recently purchased some new software that's not copy-protected, and it's so stated on the box. That's one of the reasons I chose the package over another brand. I'll support all manufacturers who stop copy protection.

—JIM KNAUSS
HOUSTON, TX

Almost every letter in last April's Mail RUN expressed a complaint about software protection. There *is* a clear solution to copy-protection problems—a solution I've been using for years. I write my own programs and don't give them to anyone!

—JOHN LOGAN
CARMEL, CA

INTERNATIONAL TELECOMMUNICATIONS

I'd like to call bulletin boards in other countries, but I need information on how to make contacts. I'd appreciate it if *RUN* readers in other countries who are involved in telecommunications ►

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

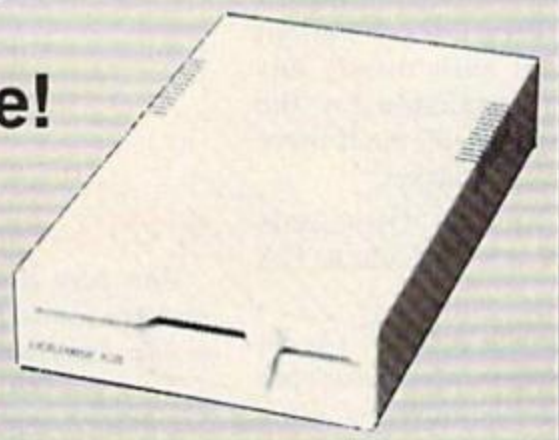
SAVE! ECI SAVE!

DISK DRIVES DISK DRIVES DISK DRIVES

FSD-2
EXCELERATOR + PLUS
Commodore Compatible Disk Drive

Direct Drive!

Faster, Quieter and More Reliable.
Full 1-Year Warranty.



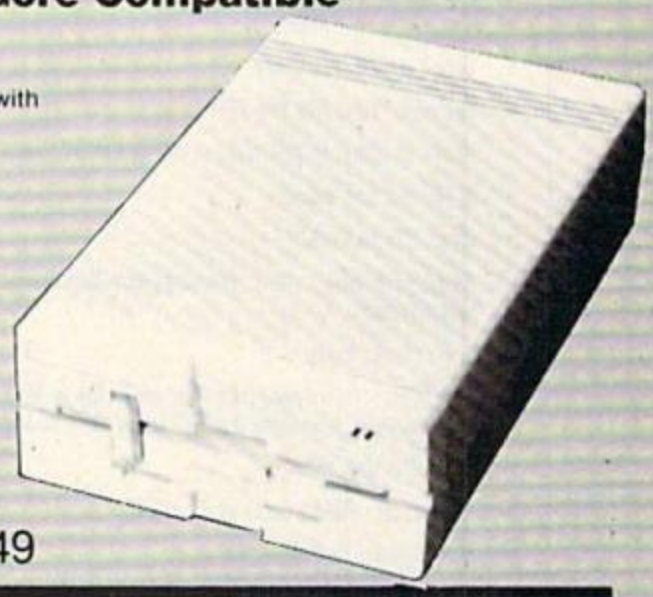
$159

List Price: $219

EXCEL-71 NEW!
1571 Commodore Compatible Disk Drive

Completely Compatible with the 1571, Yet Smaller, More Reliable *and* Compatible with the C128.

FULL 1-YEAR WARRANTY



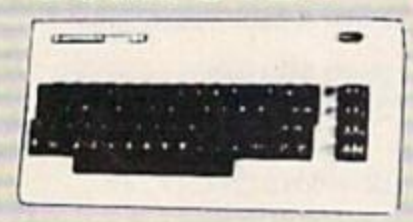
NOW ONLY
$209

List Price: $349

COMMODORE 1541 DISK DRIVE
$149

COMMODORE 1541C DISK DRIVE
$169

SPECIAL PRICES! HARDWARE & ACCESSORIES SPECIAL PRICES!

COMMODORE 64 COMPUTER


$129
With Purchase of Specially Priced Software

MODEM
300 Baud

$28

MOUSE

$36

JOYSTICK

$9.95

AMBER MONITOR
$79

COMMODORE 1351 MOUSE
"Essential for GEOS and other menu-driven software"

CALL FOR 1200 Baud Modem

WE'RE LOADED WITH HIGH QUALITY, LOW PRICED SOFTWARE! CALL FOR PRICES.

ALL MAJOR CREDIT CARDS ACCEPTED

VISA · AMERICAN EXPRESS · MasterCard · DISCOVER

6 AM TO 6 PM
6 DAYS A WEEK

Emerald Components International
P.O. Box 1441 / Eugene, OR 97440
In Oregon, call: 503/683-1154
Customer Service: 503/683-1154

ECI 1-800-356-5178

Circle 11 on Reader Service card.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Free Spirit Software, Inc.

538 S. Edgewood
La Grange, IL 60525
(312) 352-7323

Super Disk Utilities

The ultimate utilities disk for the C128 & 1571. Included among its many features are:

- Two drive copy program for the 1571
- Single drive copy program for the 1571
- File unscratch utility
- Create auto-boot utility
- Lock & unlock files utility
- File copier for one or two 1571's
- Utility to format in 1541, 1571 or IBM system 34 format
- CP/M Plus disk copier
- Direct DOS commands
- Analyze disk format utility (including Commodore & alien disk formats)
- Write protect utility
- Disk Editor - Individually trace files, edit in hex or ASCII simultaneously, print in hex and ASCII to any sector on disk
- CP/M Plus disk editor
- RAM Writer - Read & write to drive RAM
- ROM Reader - Read drive ROM
- Assemble/Disassemble drive RAM & ROM
- Erase a track or bulk erase a disk
- Most utilities also work on 1541
- And much, much more!

A complete utilities disk for only **$39.95!**

1541/1571 Drive Alignment

1541/1571 Drive Alignment reports the alignment condition of the disk drive as you perform adjustments. On screen help is available while the program is running. Works on the 1541, 1571 in either 1541 or 1571 mode, C64, SX64, C128 in either 64 or 128 mode! Autoboots to all modes! Manual includes instructions on how to load alignment program even when the drive is so misaligned that it will not load anything else. Eliminate downtime & costly repairs! Only **$34.95!**

Super Disk Librarian

Full featured disk cataloging & library system for the C128 in 128 mode. Catalogs up to 1000 disks and 15,200 program names! Operates in fast mode with 80 column display. Reads & catalogs 1541, 1571 & CP/M Plus disk directories. Reads heavily protected disks. Catalog up to 25 programs on a disk with a single keypress or selectively catalog programs. Stores in seven categories: Games, Education, CP/M, Archival, Telecommunications, Utilitities or Productivity. Recall by category, program name, disk name or locater number. Printer output includes library index, full library report, master program list, category program list & disk labels. A second drive can be addressed as a data disk. Only **$29.95!**

Super 64 Librarian

Complete disk cataloging and library system for the C64. Reads & files disk directories in 15 user-defined categories. Individual selection of program names to be filed. Includes space for user comments about programs. Recall by category, program name, etc. Printer output includes disk labels. Catalogs approximately 200 disks dependant upon number of programs and length of user comments. Organize your C64 disk library for only **$29.95!**

FREE SHIPPING & HANDLING! Illinois residents add 8% sales tax. Send check or money order to:

Free Spirit Software, Inc.
538 S. Edgewood
La Grange, IL 60525

VISA MasterCard

Circle 144 on Reader Service card.

MAIL RUN

would let me know how I can access their BBSs.

—MICHAEL TATEISHI
1709 STERLING DRIVE
LAKELAND, FL 33803, USA

GRADEBOOK SOFTWARE

I'm an elementary school teacher, and I'm thinking of buying a Commodore computer. However, one of the tasks I want to do with it is keep track of student grades, and I'm not sure there's any gradebook software available for the Commodore. Could you tell me if there is such software on the market?

—CARROLL DUPLESSIS
WALNUT CREEK, CA

Check last month's issue of RUN. *The Resource Center column discussed gradebook programs and described specific features of several of them. See page 6 in this magazine for information on ordering back issues.*

—EDITORS

CORRESPONDENCE CLUB

I'm starting a mail-in computer club for C-64 and C-128 users. It'll have a newsletter and perhaps, eventually, its own BBS. If you'd like to join, send me a letter with any comments you have about Commodore computing and any ideas you have for the club. Please include a self-addressed, stamped envelope, and I'll write back to you.

—MATTHEW MASSA
N7197 HIGHWAY E
TOMAHAWK, WI 54487

A CALL TO READERS

This page is your stage, so stand up and say a few words. Extend praise, air greivances or offer hands-on advice and information.

Send your letters to Mail RUN, 80 Elm St., Peterborough, NH 03458. Each letter must include the writer's name and complete address. RUN *reserves the right to edit letters for style, clarity and space.* ■

RUNNING AROUND THE WORLD

RUN often receives letters from readers who'd like to correspond with other Commodore users. The following list is compiled from such letters, representing quite a few countries. We've indicated some of the special computing interests of writers who've provided that information, and we also mention the systems they own. We'll update the list every so often as we accumulate more names. If you'd like to share computer information and concerns with others in the United States or abroad, here's your chance. Have fun!

Brazil:

Andre Zielasko
PO Box 77
95590-Tramandai-RS
Brazil
C-64

Great Britain:

Geoff Dean,
Good Drivers Association,
158 Gosport Rd.,
Fareham, Hants. PO1 60QJ,
England
C-128; Compunet ID GRD2

David A. Peers,
10F Avenue Crescent,
London W3 8EW,
England
C-64; business,
desktop publishing

Paul Tunney,
334 Marton Rd.,
Middlesbrough,
Cleveland, TS4 2NU,
England
C-64; programming,
games

Philippines:

Ramir Villanueva
18 Finance St.
GSIS Village
Quezon City 3008
Philippines
C-64

South Africa:

L. van der Merwe
PO Box 348
Kleinzee 8282
South Africa
C-128

United States:

Bart Boggess
740 Eastside Rd.
Deer Lodge, MT 59722
Games,
telecommunications

James E. Lambert
1121 Williams
Hastings, NE 68901
C-64; S'More cartridge

Peter Werner
2145 Ocean Ave.,
Apt. B10
Brooklyn, NY 11229

Uruguay:

Marcelo Binaguy
8 de Octubre 2743
Montevideo
Uruguay
C-64

Yugoslavia:

Andrija Kolundzic
Vojvode Brane 31
11000 Belgrade
Yugoslavia
C-64, C-128;
telecommunications

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Get your workspace back again.

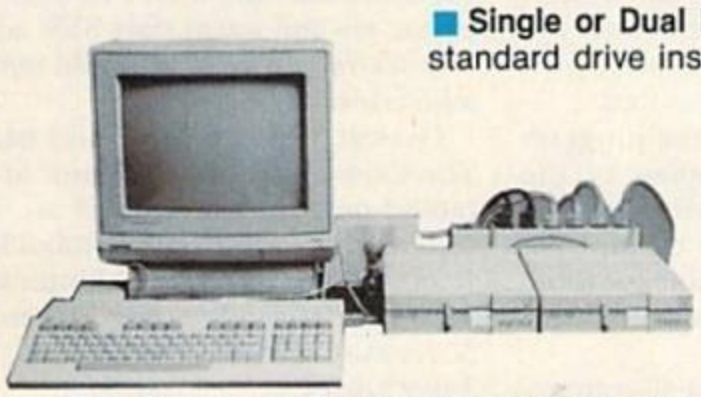
Consolidate your 64, 64C or 128 system with the Command Center.

☐ 64..... $119.95

Just look at all it includes:

- **Built-in AC Power Strip** with power surge and voltage spike protection, line noise filtering and power outlets.
- **Built-in Drive/CPU Cooling Fan** to prevent overheating.
- **Modular Telephone Plug** with its own on-line/off-line telecommunications switch. (Optional on 64 and 64C).
- **Master AC Switch** for easy system power up.
- **Single or Dual Drive Configurations** with the standard drive insert.

☐ 128..... $149.95
☐ 64C..... $129.95



The Command Center will untangle your wires, unclutter your desk and put peripherals at your fingertips.

COMMAND CENTER ACCESSORIES

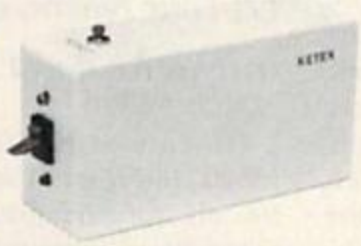
(Specify 128, 64, or 64C when ordering)

Dust Cover $19.95 — covers entire system
Keyboard Cover $19.95 — smoked acrylic
Drive Reset $14.95 — one switch per drive
Short Serial Cable $9.95 — for chaining drives
Modem Switch $9.95 — 64/64C option
Tilt/Swivel Monitor Stand $14.95 — see below

(Call for details)

DATA DIRECTOR

NEW



$39.95

- Share two Commodore® 6-pin serial devices with one computer.
- Share two computers with one serial device.
- Works with Commodore® compatible disk drives, printers, and all interfaces.
- LED indicates which device is in use.
- Convenient button resets device.
- Saves wear on disk drive serial ports.
- Eliminates cable swapping.

TILT/SWIVEL MONITOR STAND

NEW

$14.95

- Swivel base adjusts to desired viewing angle.
- Accommodates most popular monitors.
- Tension adjustment holds stand firmly in correct position.
- Padded feet to protect surface.
- Cushioned pads hold monitor securely in place.
- Places monitor at ideal viewing level and position.

SHIPPING AND HANDLING

Continental U.S.
$ 4.50 for each Command Center
$ 2.00 for one accessory item
$ 3.00 for two or more accessories

APO/FPO/CANADA/Puerto Rico/Hawaii/Alaska
$13.00 for each Command Center
$ 4.00 for one accessory item
$ 6.00 for two or more accessories

$2.00 charge for C.O.D. orders
Iowa residents add 4% sales tax

®Commodore is a registered trademark of Commodore Electronics, Ltd.

Free 30-day trial offer and one-year warranty.

For faster service, call
1-800-626-4582 toll-free
1-319-338-7123 (Iowa Residents)

DEALER INQUIRIES INVITED

-KETEK P.O. Box 203
Oakdale, IA 52319

Name _____
Address _____
City _____ State _____ Zip _____
Phone Number _____

Circle 126 on Reader Service card.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

SOFTWARE GALLERY

Where can you find adventure, business, entertainment, programming and even combat? No, not in your local movie theater—in RUN's *Software Gallery reviews, of course!* compiled by BETH S. JALA

SYMBOL MASTER — B

Here's Software Guaranteed To Catch the Attention Of Earnest ML Programmers

Symbol Master is a program that disassembles C-64 and C-128 machine language programs, using symbolic labels. It quickly produces a cross-reference table of all labels used in the ML code, which is an extremely useful tool in learning just what an ML program is doing. It can also write source files to disk for future modification and reassembly.

One of the best ways to learn ML progamming is to look at actual code written by others. Symbol Master will convert the ML programs found in magazines into a useful disassembly. You might not understand the entire program, but you'll probably be able to learn something.

Several versions of Symbol Master are available to operate in locations that don't conflict with other utilities you use. For disassembly, the ML program is loaded into memory in either 64 or 128 mode. The code can be loaded at almost any user-defined location and disassembled with an offset to generate a source file with correct addresses.

Symbol Master doesn't disassemble without some preliminary investigation of the ML program to find blocks of code and data. (To help with this process, C-64 users can employ a modified version of Micromon, and C-128 users can exercise the 128's built-in ML monitor.) The data is then passed along to Symbol Master through a command file, which is created in the Symbol Master editor and can be saved for later use.

When your command file is ready, you can run Symbol Master, and it will generate a listing of the disassembled program. It's best to send this output to the screen to see if the command file needs any fine tuning. If the program disassembly looks as though it's correct, you can list it to the printer or create a source file on disk. Of course, to use any source files you create, you'll need an assembler. Seven assemblers are supported—MAE, PAL 64, Develop-64, CBM, LADS, Merlin and Panther.

Any byte referenced in the program is assigned a label consisting of the byte's location and a prefix showing how the byte is used. For example, if the code branches to the label location, it will begin with a B, jump targets begin with a J, and so on.

Symbol Master includes a 40-column-only Label Editor program to create label files that suit a program you want to disassemble. Label files can be merged from a library of files you create, or you can use one of those supplied on the disk.

None of the programs on the Symbol Master disk are copy protected. In fact, each disk is assigned a serial number which, when registered, is used for requesting updates and making support calls to Schnedler Systems. You're even encouraged to make a backup copy for your own use.

Symbol Master suffers from three shortcomings. First, while the main C-128 editor works in 80-Column mode, it isn't fully functional. Secondly, the manual is badly in need of an index.

My last complaint is that the main editor is an ML program rather than a wedge. If you want to use a Basic command, you must exit the editor, issue the command and then SYS back to the editor via the warm-start SYS address. A quick-reference card would make the addresses easier to find.

Overall, this is a very good package. The C-64 and C-128 programs are contained on the same side of an unprotected, fast-loading disk. Symbol Master is an efficient instrument for those with ML experience. *(Schnedler Systems, 1501 N. Ivanhoe St., Arlington, VA 22205. C-64/ $49.95 disk.)*

—JIM BORDEN
CARLISLE, PA

THE PAWN — A

Let Your Imagination Roam In This Mythical Land

It's easy to praise the merits of this illustrated textual adventure, because it has all the earmarks of a first-rate fantasy software program. From the intriguing gameplay to the unique and powerful parser, The Pawn is a winner right from the start.

Close inspection of the product reveals a deep-rooted sophistication not found in many games of this kind. Oh sure, you'll spend the usual amount of ►

REPORT CARD

A Superb!
An exceptional program that outshines all others.

B Good.
One of the better programs available in its category. A worthy addition to your software library.

C Average.
Lives up to its billing. No major hassles, headaches or disappointments here.

D Poor.
This program has some problems. There are better on the market.

E Failure.
Many problems; should be deep-sixed!

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

HOT SELLERS

Super C

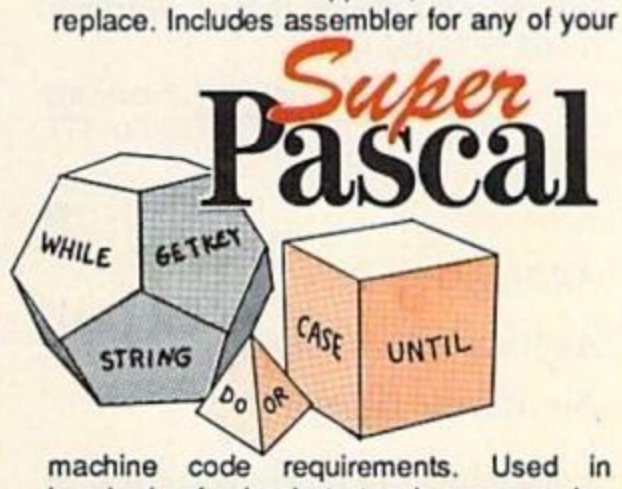
"...easy to use package with more power than most users should need...ultra-fast compile and link times make program development effortless." Adam Herst, Transactor

C is one of today's most popular languages. It's easy to transport C source code from one computer to another. With ***Super C*** you can develop software or just learn C on your Commodore. ***Super C*** is easy to use and takes full advantage of this versatile language. Produces 6502 machine code and is many times faster than BASIC. Includes full-screen editor (search, replace and block operations), compiler, linker and handbook. Combine up to seven modules with the linker. Besides the standard I/O library, a graphic library (plot points, lines, fill) and a math library (sin, cos, tan, log, arctan, more) are included. Whether you want to learn C, or program in a serious C environment for your Commodore, ***Super C*** is the one to buy.

for C-64 **$59.95** for C-128 **$59.95**

Super Pascal

Your complete system for developing applications in Pascal. A complete implementation of standard Pascal (Jensen and Wirth). C-64 version has a high-speed DOS (3X) for quick and efficient use. The extensive editor (source included) contains added features: append, search and replace. Includes assembler for any of your



machine code requirements. Used in hundreds of schools to teach programming and also used for serious development projects. But it can be used for more than just learning Pascal, use it for serious programming. With complete graphic library (source included) in machine language for super-fast execution. Want to learn Pascal or develop software using the best tool? ***Super Pascal*** is your first choice.

for C-64 **$59.95** for C-128 **$59.95**

BASIC Compiler

Now anyone can speed up their BASIC programs by 3 to 35 times! Basic-64 and Basic-128 easily convert your programs into fast machine language or speedcode (takes up less space yet protects your programs from prying eyes) or a mixture of both. You can even compile programs written with extentions—Simon's Basic, VICTREE, BASIC 4.0, VideoBasic and others. When the compiler finds an error, it just doesn't stop, but continues to find any other errors as well. Supports overlays and has many other options. 128 version works in FAST mode and allows you to use all 128K of memory. If your program walks or crawls, give it the speed to *RUN!*

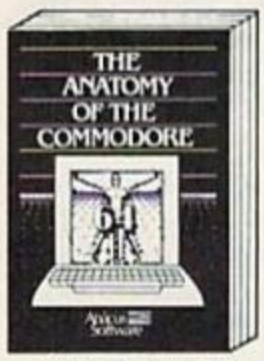
for C-64 **$39.95** for C-128 **$59.95**

"...everything a good compiler should be...easy to use...efficient...offers a good range of optional features...excellent documentation...inexpensive."
Tom Benford, Commodore Magazine

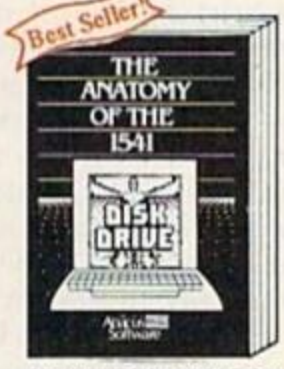
BASIC COMPILER

Give your BASIC programs a boost!

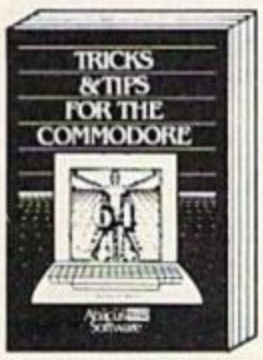
...and SUPER BOOKS!



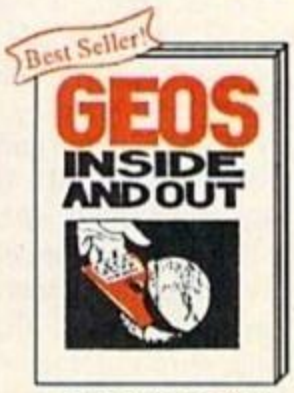
Anatomy of the C-64
Insider's guide to '64 internals. Graphics, sound, I/O, kernal, memory maps, and much more. Complete commented ROM listings. **300pp $19.95**



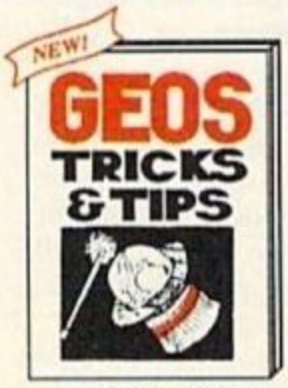
Anatomy of the 1541 Drive
Best handbook on this drive, explains all. Filled with many examples programs, utilities. Fully commented 1541 ROM listings. **500pp $19.95**



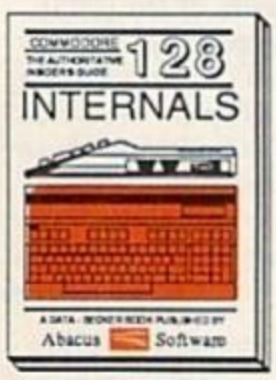
Tricks & Tips for the C-64
Collection of easy-to-use techniques: advanced graphics, improved data input, CP/M, enhanced BASIC, data handling and more. **275pp $19.95**



GEOS Inside and Out
Detailed info on GEOS. Add your own applications to GEOS. Edit icons. Constant display clock. Single-step through memory. **$19.95**



GEOS Tricks and Tips
Collection of helpful techniques for all GEOS users. Includes font editor, machine language monitor, quick backup, more. **$19.95**



C-128 INTERNALS
Important C-128 information. Covers graphic chips, MMU, I/O, 80 column graphics and fully commented ROM listings, more. 500pp $19.95

1571 INTERNALS
Essential reference. Internal drive functions. Explains various disk and file formats. Fully-commented ROM listings. 450pp $19.95

C-128 TRICKS & TIPS
Fascinating and practical info on the C-128. 80-col hires graphics, bank switching. 300 pages of useful information for everyone. **$19.95**

C-128 PEEKS & POKES
Dozens of programming quick-hitters. techniques on the operating system, stacks, zero page, pointers, and BASIC. 240pp $16.95

C-128 BASIC 7.0 Internals
Get all the inside info on BASIC 7.0. This exhaustive handbook is complete with fully commented BASIC 7.0 ROM listings. **$24.95**

Call now for the name of your nearest dealer. Or order direct with your credit card by calling 616/241-5510. Add $4.00 per order for S&H. Foreign add $12.00 per item.

Other books and software also available. Call or write for your free catalog. Dealers inquires welcome—2000 nationwide.

Abacus
P.O. Box 7219
Dept. R7
Grand Rapids, MI 49510
Telex 709-101 • Fax 616/241-5021
Phone 616/241-5510

Commodore 64 and Commodore 128 are trademarks of Commodore Ltd.

Circle 8 on Reader Service card.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

time typing in "North," "Get key," and so on. Still, there are some things this program has that others do not.

For example, the parser is so powerful that you can tell it to "Get all except the cases but not the violin case then kill the man eating shrew with the contents of the violin case. Remove the shrew's tail and use it to tie the pole and the noose together." Try giving a command like that to your other text games!

The Pawn also has, without a doubt, the most outstanding set of graphics images I've ever seen in a textual adventure. They aren't animated, and you can dispense with them simply by hitting a function key or by using the "cameo" feature. The first time you enter a location during normal gameplay, you see a full-screen rendition of the area. On subsequent visits, you'll be treated only to a cameo, or smaller,

It's your turn to explore the kingdom of Kerovnia in The Pawn.

version of the illustration, which appears in the upper right-hand corner of the screen. By playing in the Cameo mode, you see the smaller version every time you enter a new section of the game; the prompts appear faster, too, which speeds up gameplay.

Another nice function of The Pawn is its Cypheric Help section: a series of alphanumeric inputs available to assist you in getting through some of the more difficult parts of the game. It is not like "hint sections" in some other games. In The Pawn, you key in a particular line to achieve a particular answer, and certain answers can only be obtained when enough points are gathered. All questions have between two and eight cyphers, with each one resulting in a more specific response.

Two more helpful features are a self-copy program and a second disk for backing up and storing saved games. Perhaps the crowning attraction of this game is the novella that is included. "A Tale of Kerovnia" is a charming story about the mythical kingdom that serves as the backdrop to The Pawn. By reading it, you'll gain valuable insights into some of the game's happenings.

If you're looking for an enchanting tale that is sure to engage your attention and keep you entertained for hours, stop by the land of Kerovnia and spend some time with The Pawn. *(Firebird Software, Inc., PO Box 49, Ramsey, NJ 07446. C-64/$39.95 disk.)*

—ROBERT J. SODARO
FAIRFIELD, CT

WARSHIP — B

All Hands on Deck
As You Prepare Yourself
For Marine Warfare

Warship is a tactical wargame that reenacts battles in the Pacific during the years 1941–45. A game for one or two players, you can operate either Allied or Japanese naval forces in one of five types of combat. In all the clashes, you can adjust things like visibility, damage control, game length, time and date of battle, number and type of ships, terrain, and so forth.

There are 27 different Japanese ship classes and 53 various American, British and Dutch classes to choose from. You can also customize your own, or you can let the computer pick your forces. The game comes with historical scenarios—Guadalcanal, Empress Augusta Bay and San Bernardino—or you can design your own.

As with most games from Strategic Simulations (SSI), the action is deliberate and filled with options. SSI rates Warship an advanced level game, which means you can't just move the ships and fire. You control almost every detail of each ship's actions—course, speed and formation. You also have to determine how you are sighting and ranging in on targets, what you are firing and what torpedo speed settings you're going to use.

Once you get the feel of the game—which should only take an hour or two if you are a simulation player—you can set your ships' courses and stop the action only when you need to make adjustments. Battles can last for 30 minutes to two hours, and you can save the games.

So how is Warship? A little disappointing: There are no graphics to speak of, and even though you don't normally expect great graphics in a war simulation, in this case it's sometimes difficult to see the difference between Japanese and Allied ships.

The documentation is filled with details, facts and charts, but still ends up being only 90% complete. For a game with an advanced rating, it was fairly easy to master in a relatively short time, so it probably should be classified as intermediate.

Finally, unless I am a naval tactical genius and never realized it before, I found it too easy to beat the computer, which doesn't often happen with SSI games. Warship is a good game, but not a great one. *(Strategic Simulations, Inc., 1046 N. Rengstorff Ave., Mountain View, CA 94043. C-64/$59.95 disk.)*

—GUY WRIGHT
AMIGAWORLD STAFF

MOEBIUS — A–

Restoring Harmony
By Retrieving the Orb
Reveals a Mystical World

Bad times have befallen the world of Khantun. It seems that Kaimen, the once-favored disciple of Moebius the Windwalker, has stolen the Orb of Celestial Harmony. Now, the long foretold Age of Doom has arrived at Khantun, bringing with it earthquakes, savage tigers, giant water beetles, dreaded forest demons and a host of other horrors.

To restore harmony to this oriental world, someone must traverse the realms of Earth, Air, Water and Fire, battling Kaimen's evil monks along the way and liberating Moebius's monks so they can return to their rightful place in the shrines. Finally, this emancipator must reach Kaimen, destroy him and regain control of the Orb. Naturally, the only adventurer for the job is you!

First, you must become trained in sword fighting, hand-to-hand martial arts and divination. Although none of these preliminary tasks are particularly difficult, they help familiarize you with the basic control scheme of the game.

Moebius is a role-playing fantasy much in the tradition of Origin's Ultima series. However, the graphic elements here are at least twice as large and more detailed than in similar games. In addition, a bamboo frame around the playfield gives it an unusual appearance, while Eastern music helps to establish the Oriental feel.

Another feature distinguishing Moebius is that confrontations are often resolved on a separate combat screen.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

There, you'll employ your sword or bare hands to defeat evil palace guards and assassins. But, if your enemy does get the better of you, you'll lose one of your three game lives.

You begin the game with all the supplies you'll need to get started—a sword, a full waterskin and food pouch, a torch, a whetstone, three body elixers, and three defensive weapons.

You'll have to master not only how to protect yourself in combat, but how to manage these resources.

Another key to success is learning how to communicate with the local villagers. First, you must gain their trust by putting your sword away before approaching them; then, safeguard them from Kaimen's evil henchmen. In return, the villagers provide you with supplies and clues to help you move to the next realm.

Of course, no fantasy is complete without some magic artifacts and spells. By finding things like fish scales, tiger teeth and panda hair, you can become invisible, throw your voice or even pass through solid objects. You can also learn prayers to help you walk on water, restore yourself to full health, produce light and remove enemies from your presence.

I know there's really nothing here that hasn't already been done in countless other role-playing games. Still, Moebius's unique graphic style, flavor and pacing make it appealing even if you've mastered a dozen similar games. The bottom line is that, although Moebius isn't a groundbreaker, it's a solid role-playing adventure that will challenge even veteran gamers. *(Published by Origin Systems, Inc., 136 Harvey Rd., Londonderry, NH 03053; distributed by Electronic Arts, 1820 Gateway Drive, San Mateo, CA 94404. C-64/$39.95 disk.)*

—BOB GUERRA
CHARLESTOWN, MA

THE TOY SHOP — A

Now You Can
Be a Master Craftsperson
In Your Own Home

Did you ever wish you were an elf working for Santa at the North Pole? The Toy Shop can give you a bit of that feeling without having to don your snow shoes and trek all the way to his workshop.

Perhaps the package should've been named "The Toy Shop Pattern Maker," because it creates patterns from which toys can be constructed. Broderbund does an excellent job in presenting the program on the screen in such a way that the manual is only needed as a reference guide. However, when you get down to the construction stage, the 200-plus-page manual comes in handy to enable you to look at the pictures.

You can select the toy you'd like either by name or by browsing through those available, and you have the chance to customize each toy you make in a variety of ways. Graphics patterns on the toys are referred to as paints. You can choose from many designs, or they can be edited to suit your taste. These tailor-made patterns can be saved and loaded from disk.

Another Toy Shop term, decal, refers to designs and pictures that can be applied to designated locations on your model. The Print Shop graphics can even be used as decals here!

Finally, you can add text to predesignated sections of your model. Several fonts and variations thereof are available. While you're at it, give yourself some credit as the builder of the toy.

Browse Toys
Mercer Raceabout
A car collector's dream, this 1911 Mercer features steerable front wheels operated by a rod mechanism similar to that used in many early automobiles.
Use ← → and RETURN to make selection
ESC to go back

Realize your creative fantasies as you move from keyboard to cardboard in the Toy Shop.

Once your creation is complete, you can save it to disk or go directly to the print option.

With most of the models, you must paste the patterns onto cardboard before beginning construction. The board is already coated with a peel-and-stick type of surface. A moderate supply of the board and other items (balloons, sticks, and so on) are included with the package.

Construction can involve the use of scissors, a hobby knife, glue, wire and more. The book's construction guide contains both actual photographs and schematic diagrams, along with step-by-step assembly instructions. I tried several of the simpler designs and had very little difficulty. It's apparent, however, that some of the projects aren't appropriate for small children to attempt unsupervised.

You can make many things with Toy Shop—airplanes, carousels, mechanical banks, steam engines and sundials, to name a few. Also, some of the toys lend themselves nicely to group projects.

So, this summer, when the kids scream that they've got nothing to do, and they're tired of Dungeons and Dragons, turn them on to Toy Shop! My guess is that the only problem you'll encounter is letting them do the work. You may not want to give up your "toy-maker" that easily! *(Broderbund Software, 17 Paul Drive, San Rafael, CA 94903. C-64/$59.95 disk.)*

—JIM GRUBBS
SPRINGFIELD, IL

MOONMIST — B

Journey Abroad and Solve
A Ghostly Mystery Without
Leaving Your Computer

Ingredients: Two heaping tablespoons of adventure; add a pinch of suspense. Toss in one specter and seven eccentric characters. Wrap in an attractive package. Yield: Moonmist.

Moonmist is an interactive mystery/adventure that places you in the middle of upper class British society. You're an eminent American detective, and you've received a letter from an old friend, pleading for your help. So, it's off to the Cornish moors with you.

Your friend, a spirited lass named Tamara, is engaged to marry the young lord of Tresyllian Castle. But, alas, foul doings are in the works! An ancient ghost has suddenly reappeared to haunt the old place and to kill Tamara. The servants say the ghost looks amazingly like the lord's former fiancee, who died under mysterious circumstances and whose body has never been found.

To further complicate matters, the previous lord of the castle died and stowed away a treasure: a valuable artifact that must be found in order to pay the former lord's debts.

Top this all off with a 12-hour time limit, a gloomy English castle and a cast of crusty English bluebloods, and you've got a top-notch adventure that will keep you at the keyboard for many hours.

Moonmist is lauded as introductory interactive fiction. This is evident not only through the extensive documentation, but also during the course of play. Moonmist's puzzles are relatively

Continued on p. 32.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Lyco Computer

Marketing & Consultants

Since 1981

TO ORDER
CALL TOLL FREE
1-800-233-8760
in PA
(717) 494-1030
or send to
Lyco Computer
P.O. Box 5088
Jersey Shore, PA 17740

CUSTOMER SERVICE
(717) 494-1670
Mon. - Fri. 9AM - 5PM

RISK FREE POLICY

In-stock items shipped within 24 hrs. of order. No deposit on C.O.D. orders. Free shipping on prepaid cash orders within the continental U.S. Volume discounts available PA residents add sales tax. APO, FPO and international orders add $5.00 plus 3% for priority mail. Advertised prices show 4% discount for cash, add 4% for Master Card and VISA. Personal checks require 4 weeks clearance before shipping. We cannot guarantee compatibility. We only ship factory fresh merchandise. Ask about UPS Blue and red label shipping. All merchandise carried under manufacturer's warranty. Return restriction applicable. Return authorization required. All items subject to change without notice.

COMMODORE & AMIGA SOFTWARE

ACTIVISION

Portal	$26.95
Titanic	NEW!
Labrynth	$22.75
Aliens	$24.75
Hacker	$18.75
Hacker II	$20.75
Little People	$20.75
Game Maker	$24.75
Music Studio	$22.75

SPRINGBOARD

Newsroom	$32.75
Clip Art 1	$18.75
Clip Art 2	$24.75

FIREBIRD

Colossus IV	$21.95
Elite	$19.95
Frankie goes holly	$19.95
Pawn	$24.95
Talking Teacher	$24.95
Tracker	$24.95
Golden path	$24.95
Starglider	$24.95

UNISON WORLD

Art Gallery	$15.95
Art Gallery 2	$15.95
Print Master	$22.95

HI TECH

Card ware	$6.75
Heart ware	$6.75
Party ware	$9.75
Ware with all	$12.95
Holiday paper	$8.95

Broderbund Software

Printshop	$25.75
Graphics Lib. EA	$15.75
Print shop paper	$12.75
Bank st writer 128K	$32.75
Carmen Sandiego	$22.75
Karateka	$18.75
Print shop comp	$22.75
Science kit	$35.75

TIMEWORKS

Data Mgr	$44.95
Swiftcalc	$42.95
Wordwriter	$42.95
A/ Payable	$35.95
A/ Receivable	$36.95
General ledger	$36.95
Inventory	$38.95

MicroProse

Acrojet	$19.95
F-15	$21.95
Gunship	$24.95
Kennedy Approach	$19.95
Silent Service	$22.95
Solo Flight	$19.95
Top Gunner	$19.95
Conflict in Nam	$24.95

MICRO LEAGUE

Micro L. Baseball	$24.95
General Mgr	$24.95
Stat Disk	$17.95
'86 Team Disk	$14.95
Wrestling	$NEW

SSI

Gemstone Healer	$18.95
Gettysburg	$36.95
Kampfgruppe	$36.95
Phantasie 2	$24.95
Ring of Zelfin	$24.95
Road War 2000	$24.95
Shard of Spring	$24.95
Wizard's Crown	$24.95

Xetec, inc

Font Master II 64	$32.95
Font Master 128	$34.95

INFOCOM

Leather Goddesses	$22.75
Moonmist	$22.75
Hollywood Hy-jynx	$22.75

subLOGIC

Jet	$31.95
Scenery Disk	$17.95
Flight Sim II	$31.95
Football	$25.95
Baseball	$31.95
Night Mission Pinball	$21.95

ACCESS Software Incorporated

LeaderLoard	$24.95
MACH-5	$23.95
MACH-128	$29.95
10th Frame	$24.95
Exec Tournament	$14.95
Tournament 1	$14.95
Triple Pak	$14.95

BATTERIES INCLUDED

Consultant	$32.95
Paperclip	$32.95
Paperclip II	$NEW
Is Talk	$36.95
Homepak	$36.95

EPYX

Movie Monster	$24.75
Vorpol Kit	$15.75
Fast Load	$24.75
Summer Games II	$24.75
Super Cycle	$24.75
World Games	$24.75
Football	$15.75
Multi-plan	$24.75
Winter Games	$24.75
Destroyer	$24.75
Sub Battle	$24.75

Datasoft Inc.

Black Magic	$15.95
Bismark	$22.95
Tobark	$22.95
Alternate Reality The Dungeon	$26.95

BERKELEY

Geos	$38.95
Desk PK	$19.95
Font PK	$19.95
GEO/DEX	$25.95
Writers Workshop	$31.95

WE STOCK OVER 5000 SOFTWARE TITLES!

Commodore prices shown, other systems simular. Call for availability.

LYCO'S COMPUTER SPECIALS!

C= 64C COMPLETE PACKAGE

- Commodore 64c Computer
- 1541C Drive **$499**
- 1802 Monitor

(90 DAY WARRANTY)

BLUE CHIP

LIMITED OFFER!

$559

$659 with Monitor
(choice of green or amber)
★ 512 RAM
★ 360K Drive
1 year warranty
100% IBM Compatible

CALL FOR PACKAGE SPECIALS

RUN SPECIAL!

IBM COMPATIBLE
commodore
PERSONAL COMPUTERS

COMMODORE PC10-1 **$699**
COMMODORE PC10-2 **$859**

FULL MANUFACTURERS WARRANTY!

1-800-233-8760

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Panasonic

1080i

2-year warranty

★ 120 cps Draft Mode
★ 24 cps NLQ
★ Word Process
★ Friction Feed

$195.00

Lyco Computer is one of the oldest and most established computer suppliers in America. Because we are dedicated to satisfying every customer, we have earned our reputation as the best in the business. And, our six years of experience in computer marketing is your assurance of knowledgeable service and quality merchandise.

SAVE PRINTERS!

INTERFACING

CARDCO

G-WIZ	$39.95
Super G	$49.95

XETEC

Super Graphix	$64.95
Super Graphix Jr.	$45.95

DSI

PPI	$44.95

TYMAC

Connection	$49.95

STAR MICRONICS

1-year warranty

NX-10 $195.00

- 120 cps Draft Mode
- 30 cps NLQ

SAVE WITH THESE PRICES

NX-10C	$209
NL-10	$209
SR-10	$469
NP-10	$169
SD-10	$259
NB-15	$889
ND-15	$425
NX-15	$329
NR-15	$529
NB24-5	$729

EPSON

LX86	$209
EX-800	$389
EX-1000	$519
LQ-800	$459
LQ-1000	$649
FX-286e	$559
FX-86e	$329

JUKI

Juki 6100	$369
Juki 5510 w/color	$435
Juki 6300	$739
RS-232 serial board	$55

SILVER REED

EXP 420P	$209
EXP 600P	$539
EXP 800 P	$649

SEIKOSHA

SP-1000 VC (C-64)	$154
SP-1000 AP APIIC	$179
SP-1000 ribbon	$8.50
SP-1200 AS	$195
SP-1200 AI	$195
BP-5420	$1075
BP-5420 ribbon	$12.50
MP 5300AI	$549
Color Kit	$119
MP 1300AI	$369
SL-80 AI	$375
SP-180 VC	$145

PANASONIC

1080i	$195
1091i	$269
1092i	$335
1592	$399
1595	$499
3131	$249
3151	$379
1080 AP	$239

CITIZEN

120-D	$179
MSP-10	$285
MSP-15	$385
MSP-20	$325
MSP-25	$485
Premier 35	$469

TOSHIBA

321 P/S	$479
351 sheet feeder	$529
341E	$699
P351 model 2	$1099

LEGEND

808	$159
1060	$199
1380	$229
1365	$289

DIABLO

D25	$499
635	$779
D-80	$1029

OKIDATA

Okimate 20	$129
Plug n print	$CALL
120 NLQ	$209
182	$245
192+	$365
193+	$559
292 w/interface	$539
293 w/interface	$679

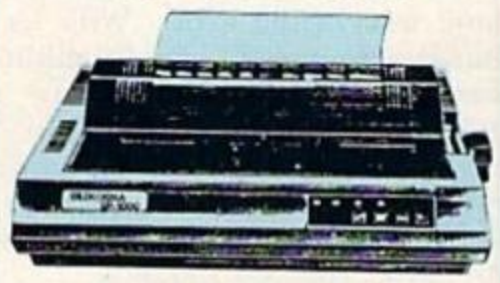
DISKETTES

	5¼	3.5
MAXELL		
SSDD	$9.99	$16.99
DSDD	$12.99	$23.99
BONUS		
SSDD	$6.99	—
DSDD	$7.50	—
SKC		
SSDD	$8.50	$14.99
DSDD	$9.50	$16.99
DSHD	$16.99	—
VERBATIM		
SSDD	$9.99	$16.99
DSDD	$12.99	$24.99

Call for generic diskette pricing!

SEIKOSHA

SP-1000VC



$154.00

- 100 cps Draft Mode
- 20 cps NLQ
- Direct Connect C-64/128
- 2-year Warranty

DRIVES

INDUS

GT (C64)	$179

BLUE CHIP

5.25 Drive	$149
128 Drive	$199

MODEMS

SUPRA	
1064	$49.95
AVATEX	
1200	$89.95
1200 hc	$119.95
DSI	
Messenger	$39.95

MONITORS

TEKNIKA

MJ-305	$309
MJ-503	$529

ZENITH

ZVM 1220 Amber	$89
ZVM 1230 Green	$89

THOMSON

4120 RGB Composite	$NEW

commodore

C128 PACKAGE $715

- Commodore C-128 Computer
- 1571 Disk Drive
- Thomson 4120 Monitor

Full warranty applies.

commodore HARDWARE

C128 Computer	$249	1802 Monitor	$185
1571 Drive	$229	C1700 RAM	$109
1902 Monitor	$285	C1750 RAM	$169
64C Computer	$175	C1351 Mouse	$39
1541C Drive	$185	1670 Modem	$99

HOURS

Mon - Thurs 9AM-8PM
Fri 9AM-6PM
Sat 10AM-6PM

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

From p. 29.

simple: Infocom's sophisticated multi-sentence parser is extremely forgiving, and much of the tedious mapping usually required with adventure games has been shelved in favor of a printed castle layout. Battle-hardened hombres take note, however—this one can be solved in as little as two to three hours.

Included with the software are playing instructions, several short stories entitled "Legendary Ghosts of Cornwall," two background letters from Tamara, a tourist brochure for Tresyllian Castle, and a Moonmist iron-on.

The storyline itself is not overly innovative. Furthermore, I found several of the characters rather uninteresting, with cardboard personalities that left me wondering why they had been included in the story at all.

Moonmist can also be exasperatingly slow to play. Disk drive access is constant and can take up to 60 seconds after each command has been entered—something to consider for owners with sensitive 1541 disk drives.

These quirks aside, Moonmist is an excellent entry-level adventure for those new to the genre. With its sophisticated parser, user-friendliness, four variations of replayability, and well-written prose, Moonmist has proved that one hundred words are still worth one thousand pictures. *(Infocom, Inc., 125 Cambridge Park Drive, Cambridge, MA 02140. C-64/$34.95 disk.)*

—JOHN V. RYAN
APO NY

FAIRLIGHT — A

Commit Yourself to the Task of Illuminating This Magical Realm

Few software releases combine the exciting play of arcade games with the mental gymnastics of text adventures: Mindscape's Fairlight is a welcome exception.

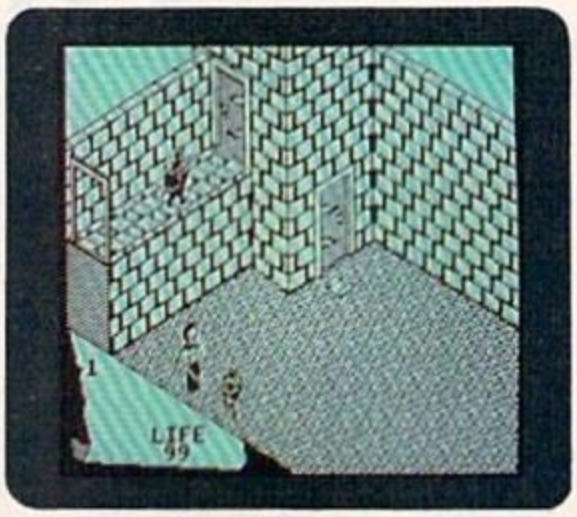
Long ago, the land of Fairlight glowed with loveliness. Its happy folk were ruled by noble kings and queens. But now, alas, its beauty is tarnished, its leadership grown weak and its once-brilliant light all but faded.

Ah, but hope is not yet dead, because there still lives a handsome young hero who can rekindle the flame. He is you—Isvar the Unknown.

First, you must survive the attacks from the deadly guards at the wicked King Avars' castle. Then you must somehow penetrate the secrets of the dungeons of this foul place to free the sorcerer trapped within and recover the lost Book of Light.

No one has entered the evil Castle Avars in 3000 years, and only the fearsome monarch of this treacherous fortress can approach the Book of Light without harm.

Yet, this terrible knowledge doesn't intimidate you. Spying a magical scroll on the ground, you pick it up, and your latest, perhaps greatest, adventure has begun.



You can be a hero to the land of Fairlight by restoring its lost light.

Fairlight, the award-winning game from England, more than lives up to its billing and should prove to be a worthwhile addition to your software library. It is designed for a single player, using a combination of joystick and keyboard or keyboard alone.

Of special note are Fairlight's top-notch graphics, created using Worldmaker 3D technology. The only fault here is the rather subdued coloration of the panels; although, after all, restoring the light of Fairlight is what the adventure is all about. (A feat this reviewer couldn't accomplish in a week of play.)

But the game's action is dandy. Isvar not only wanders through the labyrinth of the evil castle, but he also jumps obstacles, collects objects and battles the castle's vicious denizens.

At the same time, your hero must unravel the mystery of the various clues that he encounters: What help can the magic scroll provide? Can Isvar regain his strength from the food or drink he has found in this latest chamber? Or will it prove to be poison? What door will the key open?

Fairlight features more than enough action and mystery to challenge the keenest arcade game fan. And, as you'll soon learn, this hero business is no easy task.

By the time you've accomplished your mission and set the land of Fairlight once more aflame with freedom, you might find you've had weeks or even months of fun playing Fairlight. *(Mindscape, Inc. 3444 Dundee Rd., Northbrook, IL 60062. C-64/$29.95 disk.)*

—DICK SHERIDAN
FOREST HILLS, NY

ACCOUNTANT, INC. — B-

Small-Business Accounting Reduced to Three Essentials

Accountant, Inc. is a simple accounting system for the C-128 that uses the double-entry method of bookkeeping to let you easily enter transactions and produce financial statements. It features a colorful 80-column display and takes advantage of the 128's power by loading the program completely into memory.

This is one of the least expensive accounting packages that combines General Ledger, Accounts Payable and Receivable into one complete system—all on one disk. The program lets you create data disks from the menu. A set of accounts is there to be changed, deleted or added to.

The General Ledger doesn't use account numbers; rather, it prompts for the account name. This may be difficult for a business that has always used account numbers or has already coded the data with account numbers.

Since the program is based on the double-entry method, each checkbook entry must include the account name for the checking account and the offset account name. With each entry being saved to disk after completion, this input can be especially time-consuming.

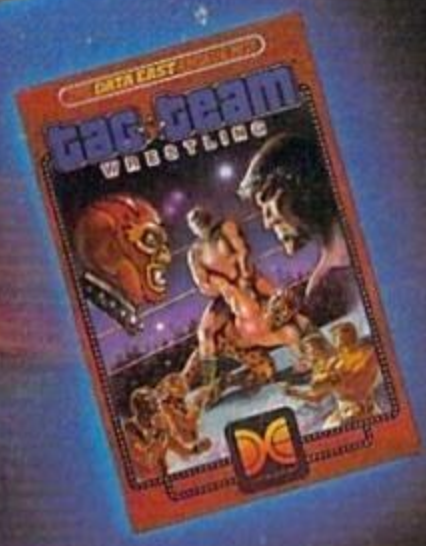
Unfortunately, the Accounts Receivable and Accounts Payable modules are lacking features found in most other accounting programs. Neither one transfers the entries automatically into the General Ledger module. Instead, an account summary is printed that must be entered as a transaction when you go back into the General Ledger. Invoices in the Accounts Receivable module can only be printed once, and each invoice can contain only the total charges. There are no allowances for breakdown of labor, parts, freight, or sales tax. Moreover, the Accounts Payable module does not print checks or purchase orders.

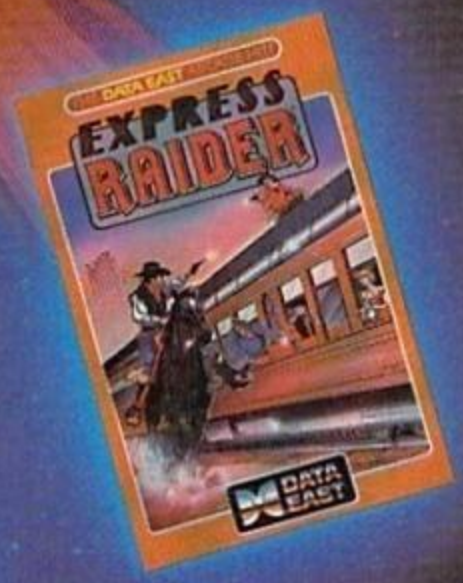
Despite the aforementioned limitations, Accountant, Inc. may be the program for your particular business. If ►

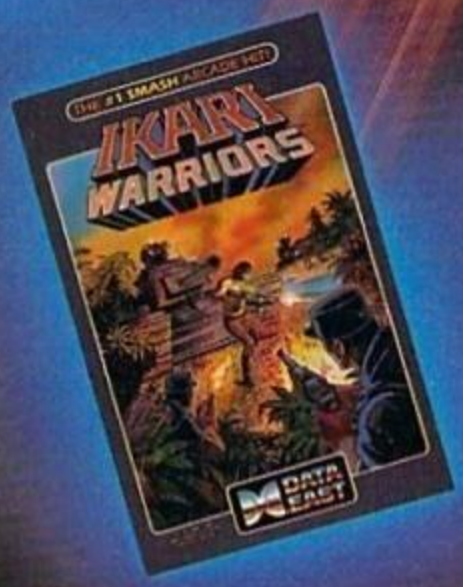
http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

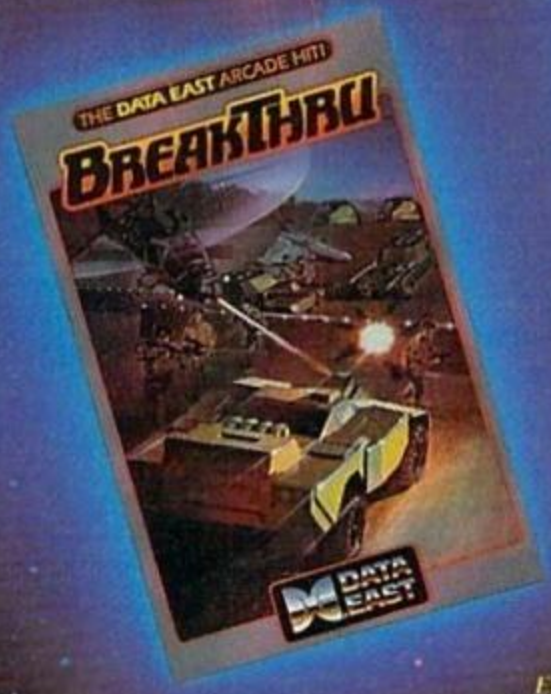
http://www.oldgamesitalia.net/

DATA EAST BRINGS ARCADE REALISM HOME!









ENTER THE DATA EAST SWEEPSTAKES

OVER 100 PRIZES – Win free Data East Computer Games, a real Data East Arcade Game, and a trip for two to the National Arcade Expo!

No purchase necessary. See participating dealers for details. Void where prohibited.*

KARATE CHAMP™ – Put on your black belt and challenge your friends or the computer through nine picturesque settings in this leading Martial Arts game to become the Karate Champ. For Commodore 64/128™ and Apple II® series.

COMMANDO™* – As the crack shot Commando, battle overwhelming odds to defeat advancing rebel forces! Armed with only a machine gun and hand grenades, you must reach the fortress. For Commodore 64/128™, Apple II® series, and IBM.

IKARI WARRIORS™* – Behind enemy lines, guerilla warfare are your tactics as you and your partner battle through the jungles, rivers, ruins, and opposing entrenchments in this interactive 2-player arcade hit. For Commodore 64/128.™

BREAKTHRU™ – Your mission is to retrieve the secret fighter plane stolen by hostile renegades. Use your sophisticated assault vehicle to Break Thru each of the five enemy strongholds. For Commodore 64/128.™

EXPRESS RAIDER™ – Bandits have seized the Gold City Express. Rescue the passengers, save the train, and recapture the loot! For Commodore 64/128.™

TAG TEAM WRESTLING™ – Teamwork and stamina are the keys, as you and your partner battle your way through the Title Matches on your quest for the belt. For Commodore 64/128™, Apple II® series, and IBM.

KUNG-FU MASTER™* – Battle the evil forces through the five dangerous floors in the wizard's castle to rescue the captive fair maiden. For Commodore 64/128™ and Apple II® series.

DATA EAST

DATA EAST USA, INC. 470 NEEDLES DRIVE, SAN JOSE, CALIFORNIA 95112. (408) 286-7074.

© 1986 DATA EAST USA, INC. *COMMANDO, IKARI WARRIORS, AND KUNG-FU MASTER MFD. UNDER LICENSE FROM CAPCOM USA, SNK CORP., AND IREM CORP. RESPECTIVELY. COMMODORE, APPLE, AND IBM ARE REGISTERED TRADEMARKS OF COMMODORE ELECTRONICS LTD., APPLE COMPUTERS, INC., AND IBM, RESPECTIVELY.
*DATA EAST SWEEPSTAKES – OHIO RESIDENTS MAY ONLY ENTER BY MAILING A 3" X 5" POSTCARD TO DATA EAST, P.O. BOX 529, SAYREVILLE, NEW JERSEY 08872.

http://www.oldgamesitalia.net/

Circle 50 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Introducing a new printer that's based on an old favorite.

The new Star Gemini II.
The printer that was made for your Commodore PC.

We took all the best features from our original Gemini,® our best-selling printer for Commodore® users.
Then we added enhanced Near Letter Quality printing…a built-in Commodore interface (with cable included)…a rear tractor feed…and an array of front panel controls that makes printing easier than ever.
The result? The new Star Gemini II. A printer designed to help your Commodore's performance. Without hurting your budget.
Now at Toys 'R' Us and other major chain stores.

In front with quality up front.

star® MICRONICS

The new Star Gemini II.

® *Commodore is a registered trademark of Commodore Business Machines, Inc.*

Circle 92 on Reader Service card.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

you've had difficulty using some of the more complex accounting packages and prefer a simpler way of entering information, Accountant, Inc. provides very good on-screen help and prompts. Or, if you need to provide a financial statement to your banker or a billing statement for your customers, this is the program for you. A well-written manual, which includes tutorials, and a back-to-basics approach to accounting round out this package. *(Softsync, Inc., 162 Madison Ave., New York, NY 10016. C-128/$99.95 disk.)*

—SANDRA COOK JEROME
PHOENIX, AZ

THE MOVIE MONSTER GAME ____ A-

Here's Your Chance To Create Your Own Midnight Thriller

It was six years ago that I bought my first computer game from Epyx: Crush, Crumble and Chomp. Since the game was so popular, it's not surprising that Epyx would resurrect the same idea in a new wrapper.

The Movie Monster Game is different from my old monster chums. None of the original monsters remain. In their places are more famous names: Godzilla, the film monster king; Mr. Meringue, who had a walk-on, climb-on and roast part in Ghostbusters; a wasp-like Sphectra and spider-like Tarantus; a Blob look-alike named Glog; and, for this age of mechanization, it just wouldn't be right without Mechatron.

Each monster is ranked for speed, strength, toughness and the ability to recover. Sphectra is very fast, but weak and not tough enough. Mechatron and Godzilla are very strong and tough. Godzilla is slow to recover and Mechatron won't recover at all. Tarantus is probably the best selection: It's fast, with average qualities in all other areas, and a good place for beginners to start.

Each monster also has a specific weapon: Godzilla breathes fire, Sphectra has a sonic weapon, Mr. Meringue spits meringue globs, Mechatron has a laser, the Glog has an acid touch and Tarantus shoots out a web.

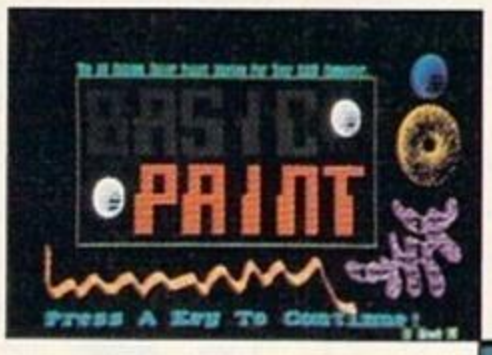
Three target cities have survived from Crush, Crumble and Chomp: New York, San Francisco and Tokyo. London, Paris and Moscow have been added to give The Movie Monster six locations.

You also get to select a goal for your adventure. You can try to destroy a landmark, escape from those nasty humans, search for your offspring or just create havoc by going berserk.

What The Movie Monster Game offers is superb graphics. The animation is smooth, and the characters are well drawn and defined. It really is very much like watching a film, which is exactly how the game is set up: It opens in a theater, the curtains go up, the lights go off and the big screen becomes your computer screen. When the adventure ends, a score indicates how well you accomplished your objective.

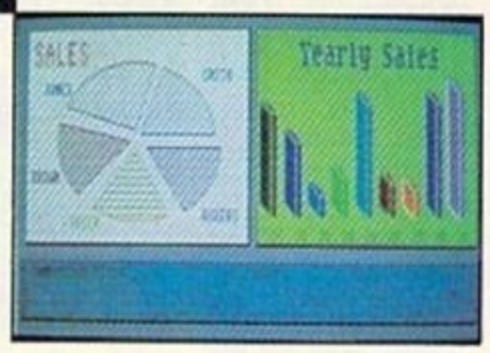
There are some nice features in the game—a pause button and a sound track that lets you know when you've reached your goal. I still feel that the game lacks the soul and the flexibility of the original, but perhaps I'm comparing it too much with my personal *Gone With the Wind* of computer games. *(Epyx, 600 Galveston Drive, Redwood City, CA 94063. C-64/$39.95 disk.)*

—RICK TEVERBAUGH
ANDERSON, IN ■



Introducing
BASIC 8

By Lou Wallace & David Darus



At last, you can unleash the graphics potential of your Commodore 128 to achieve performance which rivals that of 16-bit micros! Imagine your 128 (or 128-D) producing resolution of 640 x 200 in monochrome and 640 x 192 in 16 colors without any additional hardware. Sound impossible? Not with **Basic 8**, the new graphics language extension.

Basic 8 adds over 50 new graphics commands to standard C-128 Basic. Just select one of many graphics modes and draw 3-D lines, boxes, circles and a multitude of solid shapes with a single command. We've even added commands for windows, fonts, patterns and brushes.

To demonstrate the power and versatility of this new graphics language, we have created **Basic Paint**, a flexible icon-based drawing application. Written in **Basic 8**, **Basic Paint** supports an expanded Video RAM (64K), RAM Expanders, Joystick and the New 1351 Proportional Mouse.

Also included is an icon-based desk-top utility which provides quick and convenient access to each of your very own **Basic 8** creations.

All this graphics potential is yours at the special introductory price of $39.95. The package includes **Basic 8**, **Basic Paint**, the desk-top utility, a 180-page manual and a run time module. (80-Column RGB Monitor Required)

WIN $1000.* PROGRAMMING CONTEST

PATECH Software, Inc.

Mail your order to:
Computer Mart, Dept. G • 2700 NE Andresen Road • Vancouver, WA 98661
Phone orders welcome: 206-695-1393
Same day shipping/No C.O.D. orders outside U.S.
CHECKS, MONEY ORDERS OR VISA/MASTERCARD.
PLEASE NOTE: Free shipping & handling on all orders • C.O.D. add $3.00 to total order • All orders must be paid in U.S. funds.

VISA MasterCard

Complete Package
$39.95
*Details inside package

Circle 48 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Computer Direct

A Division of PROTECTO

"The Computer Experts"

22292 N. Pepper Rd., Barrington IL 60010

• OUR WARRANTY •

Most of our products carry a minimum 90 day warranty from the date of purchase. If problems arise, simply send your product to us via U.P.S. prepaid. We will IMMEDIATELY send you a replacement at no charge via U.P.S. prepaid. This proves once again that...

We Love Our Customers!

Commodore 64c

Includes the GEOS program.

Sale $159.95

(Add $10.00 shipping) List $299

1541c Disk Drive

Sale $179.95

(Add $10.00 shipping) List $249

Commodore 128

Sale $289.00

(Add $10.00 shipping) List $399

1571 Disk Drive

Sale $259.95

(Add $10.00 shipping) List $349

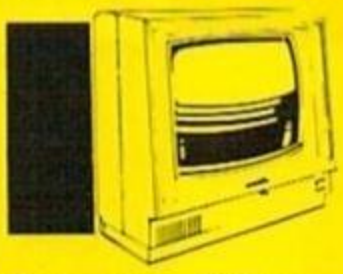
TV Tuner

Now switch your computer monitor into a television set. This tuner has a UHF/VHF/Computer selector switch with front panel programmable selection buttons. Rabbit ear antenna for VHF viewing with adapters for outdoor antenna and cable included. 75 ohm terminal with 300-75 ohm adapter.

Sale $79.95

(Add $3.00 shipping) List $130

13" Color Monitor



High Resolution, 1000 character display, with built in audio speaker and volume control.

Sale $179.95

(Add $14.50 shipping) List $329

Big Blue Printer

This is the affordable printer you've waited for! 8½" letter size, 80 column dot matrix, heat transfer printer features upper and lower case, underline, word processing, and much more.

Sale $39.95

(Add $7.50 shipping) List $199

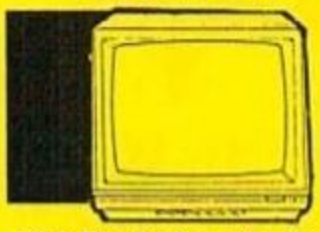
87 EP Printer & Typewriter Combination

Superb Silver Reed letter quality daisy wheel printer/typewriter, just a flick of the switch to interchange. Extra large carriage, typewriter keyboard, automatic margin control, compact, lightweight, drop in cassette ribbon! Centronics parallel port.

Sale $159.95

(Add $12.00 shipping) List $299

14" RGB & Composite Color Monitor



High Resolution, 80 column Monitor. Switch from RGB to Composite. (C128 - IBM -Apple) RGB cable $19.95.)

Sale $237.00

(Add $14.50 shipping) List $399

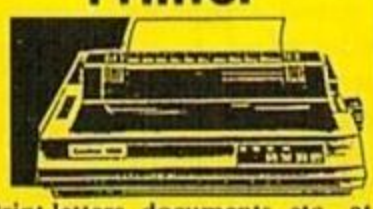
12" 80 Column Monitor

High Resolution amber or green screen monitor. 80 col. x 1000 lines at center. Non-glare screen. Works terrific with Commodore, IBM, Apple and Laser business computers.

Sale $99.00

(Add $10.00 shipping) List $229

Comstar 1000 Printer



Print letters, documents, etc., at 100 cps. Works in Near Letter Quality mode. Features are dot addressable graphics, adjustable tractor and friction feed, margin settings, pica, elite, condensed, italics, super/subscript, underline, & more. CBM Interface Included.

Sale $179.95

(Add $10.00 shipping) List $349

160-180 CPS NLQ 180 Printer

This centronics parallel printer has a Near Letter Quality button on the front panel. No more turning the printer on and off. The 8K buffer will free up your computer four times faster than conventional printers and the high speed will keep you computing more than printing. Super graphics along with Pica, Elite, Italics, and Condensed print. **Lifetime Warranty** on Print Head plus 6 month immediate replacement policy.

Sale $199.00

(Add $10.00 shipping) List $499

MasterCard

Call 312/ 382-5244 or 382-5050 To Order

8 am - 8 pm CST Weekdays / 9 am - 12 noon CST Saturdays

VISA

Circle 15 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Best Service in the USA • 1 Day Express Mail • Over 1000 Programs • Volume Discounts • 15 Day Free Trial • Customer List of Over 3,000,000 - Largest in the USA

For FREE Catalogs & Ordering Call

(312) 382-5244

(312) 382-5050

Call Before You Order: *Prices may be lower plus we offer special system deals*

Musical Keyboard

This sturdy 40 key professional guage spring loaded keyboard gives the feel and response of a real keyboard instrument. (Conductor software required)

Sale $ 69.00

(Add $10.00 shipping) List $160

1200 Baud Modem

Save time and money with this 1200 Baud modem. It has many features you expect a modem to have plus 4 times the speed! For Commodore Computers.

Sale $ 79.95

(Software Included) List $199

Computer Cleaners

- TV/Monitor Screen Restorer & Cleaning Kit
- Disk Drive Cleaner
- Anti-Static Keyboard Cleaner

*Choose any one of these three computer cleaners for only $9.95!

Sale $ 9.95 *

List $19.95

5¼" Disk Filer

Dust and dirt can hurt your disks. Proper filing and protection will reduce unneccessary wear and tear. Holds over 50 five and a quarter inch floppy disks.

Sale $ 12.95

List $24.95

5¼" Floppy Disks

Double Sided / Double Density
100% Certified
Lifetime Warranty

Sale .29¢ each

1 Box of 100 — $29.00

List $1.99 each

Commodore Software

BCI

TOM WEISKOPF PRO GOLF (D)	$11.95
VIDEO PHILE (D)	14.95
PRINTERS LIB. 1 (D)	8.95
PRINTERS LIB. 2 (D)	8.95
DATABASE MGR./PLUS - C128 (D)	14.95

BLUE CHIP

BARON (D)	$14.95
MILLIONAIRE (D)	14.95
TYCOON (D)	14.95

BRODERBUND

PRINT SHOP (D)	$25.95
GRAPHICS LIB. 1,2 or 3 (D)	15.95 each
COMPANION (D)	22.95
TOY SHOP (D)	26.95
WHERE IS CARMEN SANDIEGO (D)	21.95
GRAPHICS LIB. HOLIDAY ED. (D)	15.95

COSMI

SUPER HUEY II (D)	$12.95
TALLADEGA (T)	10.95
BEYOND FORBIDDEN FOREST (D)	10.95

DATA EAST

COMMANDO (D)	$22.95
KARATE CHAMP (D)	22.95
KUNG FU MASTER (D)	22.95
BREAK THRU (D)	22.95
EXPRESS RIDER (D)	22.95
IKAI WARRIORS (D)	22.95
TAG TEAM WRESTLING (D)	22.95

DATA SOFT

221 B BAKER STREET (D)	$17.95
MERCENARY (D)	17.95
NEVER ENDING STORY (D)	12.95
MIND PURSUIT (D)	17.95
VIDEO TITLE SHOP (D)	17.95
THEATRE EUROPE (D)	19.95

DESIGNWARE

BODY TRANSPARENT (D)	$19.95
EUROPEAN NATIONS & LOCATIONS (D)	19.95
STATES AND TRAITS (D)	19.95

ELECTRONIC ARTS

HEART OF AFRICA (D)	$9.95
ONE ON ONE (D)	9.95
PINBALL CONTRUCTION (D)	9.95
MUSIC CONSTRUCTION (D)	9.95
RACING DESTRUCTION (D)	9.95
MARBLE MADNESS (D)	22.95
STAR FLEET I (D)	25.95
BALKON RAIDER (D)	22.95
QUIZAM (D)	22.95

EPYX

CHAMPIONSHIP WRESTLING (D)	$22.95
DESTROYER (D)	22.95
STREET SPORTS BASEBALL (D)	22.95
SUB-BATTLE (D)	22.95
WORLD GAMES (D)	22.95
WORLD KARATE (D)	16.95
CREATE A CALENDAR (D)	18.95

HAYDEN

SARGON II (D)	$9.95
SAT VERBAL (D)	14.95
SAT MATH (D)	14.95
SAT SAMPLE TEST (D)	14.95

HI-TECH EXPRESSIONS

CARD WARE (D)	$7.95
HEART WARE (D)	7.95
PARTY WARE(D)	9.95
WARE WITH ALL KIT (D)	9.95
HOLIDAY PRINT PAPER (D)	7.95

SOFTSYNC

ACCOUNTANT, INC. C128 (D)	$59.95
DESK MANAGER (D)	24.95
KID PRO QUO (D)	19.95
MODEL DIET (D)	19.95
TRIO C64 (D)	29.95

S.S.I.

B-24 (D)	$24.95
BATTLE OF ANTIETAM (D)	32.95
GETTYSBURG (D)	34.95
BATTLE CRUISER (D)	34.95
REBEL CHARGE AT CHICKAMAUGA	29.95
PRESIDENT ELECT 1988 (D)	18.95
KAMPFGRUPPE (D)	34.95
WAR SHIP (D)	32.95

SUB—LOGIC

FLIGHT SIMULATOR II (D)	$31.95
JET (D)	25.95
FOOTBALL (D)	25.95
BASEBALL (D)	31.95

UXB

SKY RUNNER (D)	$19.95
BAZOOKA BILL (D)	14.95
STRIKE FORCE COBRA (D)	14.95

ABSOLUTE

X-15 ALPHA MISSION (D)	$19.95

ACCESS

TRIPLE PACK (D)	$14.95
W.C.LEADER BOARD (D)	24.95
FAMOUS COURSES DISK 1 (D)	14.95
MACH 5 (C)	19.95
MACH 128 (C)	28.95
TENTH FRAME (D)	23.95

ACCOLADE

ACE OF ACES (D)	$18.95
DAM BUSTERS (D)	18.95
FIGHT NIGHT (D)	18.95
HARDBALL (D)	18.95
LAW OF THE WEST (D)	18.95
KILLED UNTIL DEAD (D)	18.95

ACTION SOFT

UP PERISCOPE (D)	$19.95

ARTWORK

BEACH BLANKET VOLLEYBALL (D)	$9.95
EQUESTRIAN SHOWJUMPER (D)	9.95
HIGHLAND GAMES (D)	9.95
POLICE CADET (D)	9.95
THAI BOXING (D)	9.95
BRIDGE 4.0 (D)	16.95

BETTER WORKING

WORD PRO WITH TURBO LOAD (D)	$24.95
FILE PRO (D)	19.95
SPREADSHEET (D)	19.95

Shipping, Handling & Insurance Information and Charges

Add $3.00 (unless noted) for shipping, handling, and insurance. Illinois residents please add 6¼ % sales tax. Add $6.00 (double the amount) for CANADA, PUERTO RICO, HAWAII, ALASKA, APO-FPO orders. All orders must be in U.S. Dollars. WE DO NOT EXPORT TO OTHER COUNTRIES EXCEPT CANADA. Enclose Cashier Check, Money Order or Personal Check. Allow 14 days for delivery, 2 to 7 days for phone orders, 1 day express mail. Prices & Availability subject to change without notice. Hardware shipping prices vary according to weight. Please call for amount. Monitors can only be shipped to 48 contiguous United States. No APO-FPO for Monitors.

VISA-MASTER CARD-C.O.D. Call for C.O.D. Charges.

Circle 15 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Making Music With MIDI

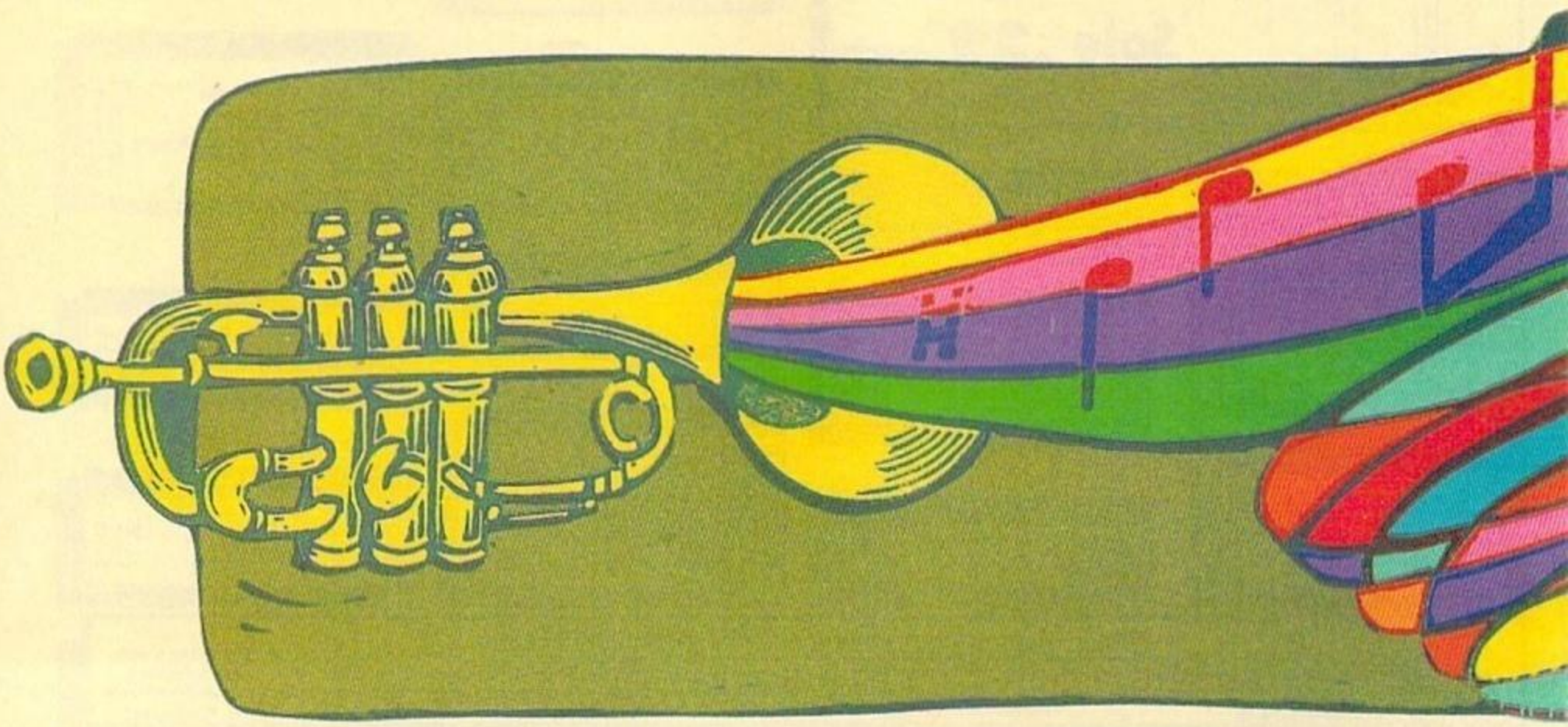
By combining a Commodore with MIDI technology, almost anyone can produce professional-sounding music.

by DAVID BROOKS

THE BEATLES, Glenn Miller, Leonard Bernstein . . . Well, maybe not, but with a C-64 or a C-128 and some MIDI equipment and software, you *can* become a credible and creative musician.

To use MIDI effectively, you need a musical goal to motivate you, because learning to use the hardware and software takes some effort. However, once you've learned, you'll find that MIDI will greatly expand your creative horizons. For me, the motivator is expressing musical ideas that are beyond my technical ability. MIDI is especially valuable to those who are interested in music performance, composition or teaching.

It's possible to assemble a MIDI system for about the price of a Commodore computer system, and, even for that modest amount, it will sound great. In fact, if you've done any music programming with the C-64's SID chip—a device that caused its own musical revolution—you'll



http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

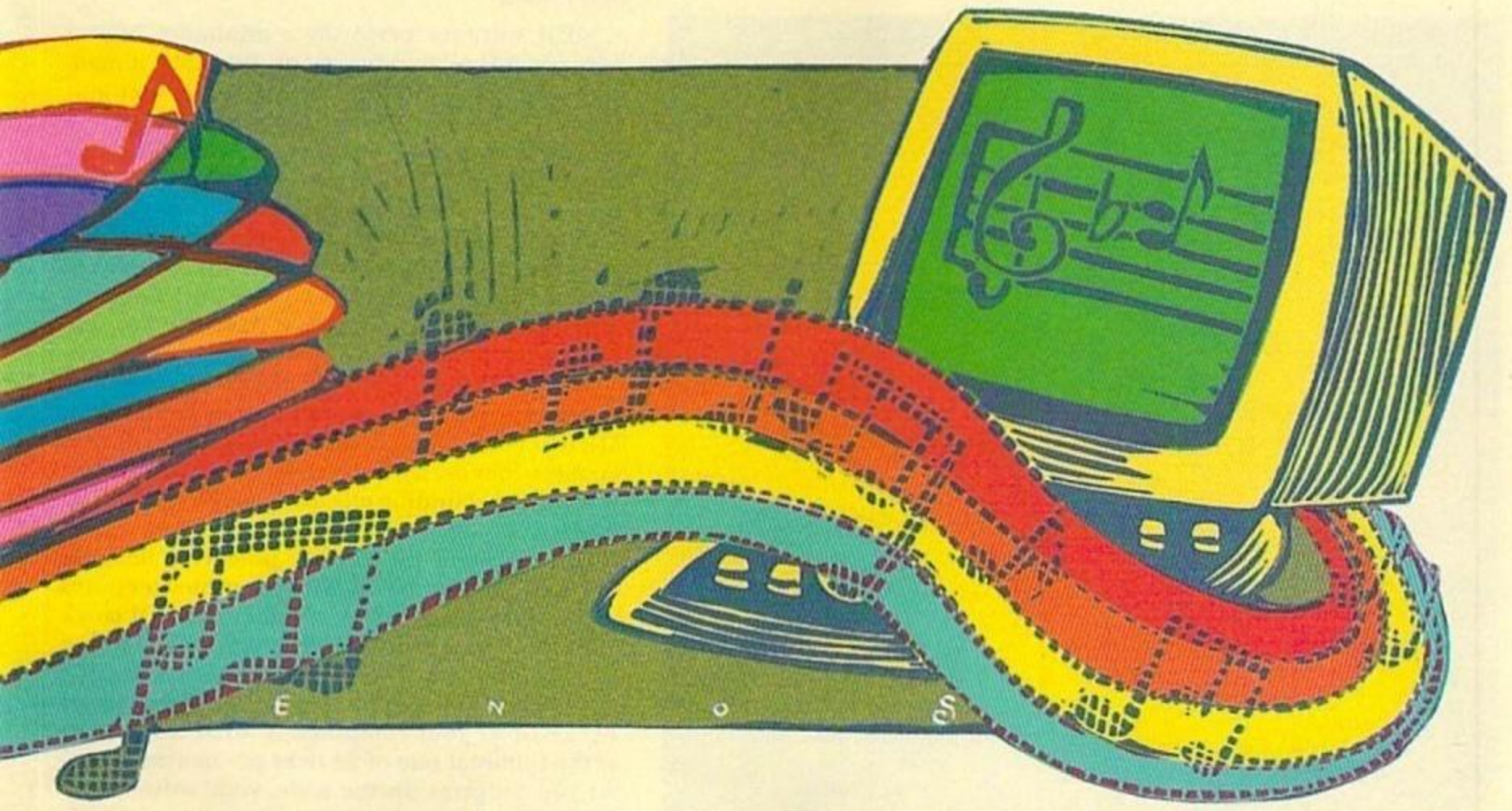
be amazed at MIDI's sound quality. There's also an abundance of good MIDI software available for both the amateur and the professional musician, although it's expensive compared to other "serious" applications for the mass market.

What Is MIDI?

MIDI is an acronym for Musical Instrument Digital Interface, a hardware and software standard for data exchange between devices, such as synthesizers, drum machines and computers, used in producing electronic music. The standard was developed by manufacturers a few years ago in response to a growing dissatisfaction with the proliferation of incompatible equipment. MIDI was an instant and overwhelming success, and now virtually every manufacturer of electronic musical devices produces MIDI-compatible equipment.

As an example of how MIDI works, consider pressing and releasing just one key on a keyboard sound synthesizer. In addition to producing a sound, this is encoded as digital data in a standard format and sent to a MIDI-out port on the synthesizer. (This port is nothing more than a special-purpose serial output port similar to the one on your computer.) If the MIDI-out port is connected to the MIDI-in port of another synthesizer, the second instrument will respond just as though you'd pressed one of *its* keys.

MIDI was originally used to connect instruments like this during live performances, but it soon became obvious that its real power lay in computer control of such systems. A computer equipped with a simple hardware interface can "record" what you play on a MIDI instrument and transmit the data to other MIDI instruments. When the data is stored in the computer, you ►



http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

can manipulate it using MIDI software, even the simplest of which offers capabilities beyond the most sophisticated conventional music studio.

MIDI standardization specifies only the format and content of transmitted digital information. Individual manufacturers configure their products in a variety of ways within the constraints of the standard. For example, the "system common" MIDI commands for turning notes on and off will be understood by every MIDI instrument, but the audible results may not be the same. MIDI products also come with a variety of "system exclusive" commands that make sense only to the specific device or to various devices from the same manufacturer.

The minimum requirements for a Commodore-based MIDI system are a C-64 with a monitor, a 1541 or equivalent disk drive, a MIDI interface, a MIDI-compatible musical instrument (most likely a keyboard synthesizer) and some software.

The Interface

The hardware interface is the heart of a computer-based MIDI system in that it enables the computer to "talk" with the other components. Often no larger than a game cartridge, it plugs into the cartridge or user port of the computer and has a minimum of one MIDI-out and one MIDI-in jack. The jacks accept standard five-pin DIN plugs, but you must be careful to use only cables that are specifically intended for MIDI connections.

Several hardware interfaces are available, and most adhere to one of two informal "standards": Sequential or Passport. The operational difference between these standards lies only in the way the registers of the interface are addressed.

The Casio CZ-101 with Dr. T's interface and computer.

Synthesizers

Keyboard synthesizers are the most common MIDI instruments, although many other electronic musical devices, like drum machines, come in MIDI-compatible versions. Not all keyboards are MIDI-compatible, including—Commodore owners take special note—the C-64 music keyboards that were popular a couple of years ago.

Most MIDI keyboard synthesizers let you play "polyphonically"—that is, several notes at once. When you play, you choose a particular sound quality defined by a "patch" (including various parameters), and all the notes play with this quality. In MIDI terminology, this is known as "omni" mode, and some keyboards operate only in this mode, even under software control.

Other keyboards, often called "multitimbral," can be programmed to produce several different sound qualities at once. These devices operate in what is called the "mono" mode, because each voice of the synthesizer can be programmed independently with its own sound patch.

A multitimbral instrument can provide a greater variety of sounds under computer control than an omni-only instrument. However, this is not necessarily reflected in the price; a multitimbral may cost less than an omni-only.

Several MIDI synthesizers come in both keyboard and rack-mounted "modular" versions. The rack-mounted modules can be played from a master keyboard or directly from the computer.

Software

MIDI software performs a minimum of two separate but related functions. Basically, it manages communication between the computer and the MIDI devices connected to it through the interface. The most elementary information in this communication is the occurrence of keypresses and releases. However, to provide you with more control, a MIDI system may generate and transmit other types of information as well, such as sound-patch parameters and keypress velocity, which indicates how hard the key was pressed.

The second function of MIDI software, manipulating musical data, is at the forefront of the MIDI revolution. It is this editing function that enables inexperienced musicians to create sophisticated-sounding electronic music with MIDI devices.

For a hint of the editing potential, imagine playing a simple one-octave scale of quarter notes and keeping track of the number of MIDI clock "ticks" between consecutive keypresses. (Timing of events in a MIDI system is controlled by a clock signal that may be generated by an external device or by your computer. A MIDI clock beats at the nominal rate of 24 ticks per quarter note.) As you progress up the scale, your software records elapsed times between the notes of 22, 26,

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

20, 23, 24, 21 and 22 ticks. That timing is pretty good, but perhaps you want it even better, say, to synchronize the scale with other notes or with a percussion track from a drum synthesizer. With MIDI software, you can easily accomplish this by rounding off the elapsed time to the nearest multiple of 24 ticks.

To play the scale twice as fast, all you'd have to do is correct the rhythm to the nearest 24 ticks and divide all the times by 2. Presto—perfect eighth notes! You can't do this with a tape recorder, because if you speed it up or slow it down, the pitch changes.

MIDI programs are often termed "sequencers," because they provide a way to record a series of musical parts, or sequences, that you can then combine and edit in a variety of ways. With such a sequencer program, if you want to improvise a melody over a repeating bass line, all you have to do is record the bass line once and instruct the sequencer to repeat the line the required number of times. If you'd like to fill out your composition with supporting harmony, that's no problem either—MIDI supports up to 16 data channels, each one of which can carry its own, possibly polyphonic, part.

Sequencers are designed so you can record all the parts in a piece and then practice one at a time by just turning off the playback channel for the part you want to play yourself. Some of them let you print out, with an appropriate printer, a conventional musical score for a piece you have in a file.

Different MIDI programs employ different approaches to editing. One approach, which provides a comfortable working environment for traditional musicians, mimics recording on a fancy tape recorder, even down to using tape-recording terminology. However, much of the musical potential of MIDI has no counterpart in conventional analog recording, so this approach is restrictive. The best MIDI software lets you manipulate all components of a MIDI event. If a program doesn't easily let you edit key velocity or the timing of events, or let you easily add or delete data, keep looking for one that does!

With some recent MIDI software, you can edit and replace sound patches, although the ROM cartridges required to save patches can be expensive, and the editing process is often rather unfriendly. Patch-programming software falls into two categories: librarians, which manipulate patches and store them on computer disks, and editors, which typically include librarian functions, but also let you create your own patches.

Patch programming is highly synthesizer-specific, and it requires a lot of time and programming skill, plus a thorough understanding of MIDI data structures. Some patch editors use Commodore graphics to display waveforms and amplitude "envelopes."

A Sample System

MIDI technology is still at the stage where you must assemble your own system. To help you in planning it, here's an outline of devices and software I'd recommend.

A Commodore-based MIDI system for a beginner can center on a C-64. However, if you want to use one of the new programs that take advantage of the C-128's increased memory, you'll need to have that machine.

My choice for MIDI software, Dr. T's Keyboard Controlled Sequencer, comes in versions for both the C-64 and the C-128. The 128 version is superior enough to justify purchasing a 128, if you're serious about MIDI music. Files created on the 64 version of Keyboard Controlled Sequencer are upward compatible to the 128 version, and Dr. T offers a liberal trade-in policy on the 64 software. You'll find, however, that most MIDI software for Commodore computers is for the C-64. Dr T's program supports both Passport and Sequential interfaces. As for an interface, you can buy the least expensive one you can find, as long as it follows either the Passport or Sequential standard.

An excellent choice for your first MIDI keyboard would be the Casio CZ-101. It's inexpensive (at widely available discount prices), but it comes with 32 sound patches and can be programmed to play up to four of them at once, a distinct plus for a one-keyboard system. Also, since it has excellent sound quality, you'll still be able to use this instrument if you upgrade to a more sophisticated system. The main disadvantage of the CZ-101 is its insensitivity to keypress velocity. Also, its keys are smaller than on a full-size piano keyboard, but that shouldn't be a problem for most applications. The CZ-1000 is equivalent to the CZ-101, but with full-size keys. ►

TABLE 1. Manufacturers of the products mentioned in the article.

Synthesizers:

Casio CZ-101 or CZ-1000
Casio
15 Gardner Rd.
Fairfield, NJ 07006
201-575-7400
CZ-101, $499; CZ-1000, $699

Ensoniq ESQ-1
Ensoniq
263 Great Valley Parkway
Malvern, PA 19355
215-647-3930
$1395

Yamaha FB-01
Yamaha International Corp.
PO Box 6600
Buena Park, CA 90620
714-522-9011
$350

Timer:

PAIA Model 6770 Master Synchronizer and Model 7700 Power Supply
PAIA
1020 W. Wilshire
Oklahoma City, OK 73145
405-843-9626
Synchronizer, $74.95; Power Supply, $59.95; add $3 shipping and handling for each product

Software:

Dr. T's Keyboard Controlled Sequencer
Dr. T's Music Software
66 Louise Rd.
Chestnut Hill, MA 02167
617-244-6954
C-64 version, $149;
C-128 version, $225

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

A MIDI system expanded beyond this basic configuration should include a velocity-sensing keyboard and probably would include some other instruments as well. My choice for a velocity-sensing keyboard is the Ensoniq ESQ-1, an eight-voice synthesizer with extensive MIDI features.

You might also want to consider a rack-mounted synthesizer, such as the Yamaha FB-01. It provides 196 preprogrammed sound patches, can play up to eight patches simultaneously, responds to velocity information and can be programmed and played entirely from the computer. The FB-01 has an especially flexible MIDI implementation. For example, you can program it to assign different sounds to different MIDI key numbers, so the keyboard can be "split" with one patch for a bass line and another for a melody line.

My MIDI system includes an external timing device called a "pulse clock," which replaces the usual software- or drum machine-based MIDI clock and has lots of other uses in controlling musical equipment. This clock, the PAIA Model 6770 Master Synchronizer, is available only in kit form, and it requires a separate power supply, the PAIA Model 7700 or equivalent.

Where To Get It

In Table 1, you'll find the addresses of the manufacturers of the products I've mentioned. Keep in mind that these products are only a sampling of the MIDI products on the market. Also keep in mind that, while the manufacturers may be good sources of product information, you'll have to buy the synthesizers through a music store. Any store that serves the pop and rock community should be able to help you. The timer and power supply can be ordered directly from PAIA.

As for the software, you're better off buying from the publisher, because most traditional stores still haven't adopted a coherent approach to marketing MIDI programs. Unfortunately, this means that a lot of MIDI equipment is being seriously underutilized.

To help you shop for software, I've included the names and addresses of a number of publishers in Table 2. You'll also find that the classified sections of music magazines and the newsletters of instrument-specific user's groups often include software bargains, especially in librarians and patch editors.

There are several places to get additional information about MIDI hardware, software and applications. The International MIDI Association (11857 Hartsook St., North Hollywood, CA 91607) is the primary voice of the MIDI industry. It distributes a regular newsletter, *The IMA Bulletin*, with product reviews and educational articles, and it's the official distributor of documentation describing all aspects of the MIDI standard. Membership in the IMA is essential for anyone interested in MIDI programming.

Several magazines, including *Keyboard*, *Music Technology*, *KCS* and *Electronic Musician* address the needs of musicians, including that still-elusive hybrid, the computer musician. ■

David R. Brooks is classically trained in piano and has a special interest in the performance of Renaissance and Baroque music. He enjoys producing music on his MIDI system of several keyboards and synthesizer modules.

TABLE 2. Publishers of MIDI software.

The Beam Team
6100 Adeline
Oakland, CA 94608
415-658-3208

Dr. T's Music Software
66 Louise Rd.
Chestnut Hill, MA 02167
617-244-6954

Ensoniq
263 Great Valley Parkway
Malvern, PA 19355
215-647-3930

Firebird Software
PO Box 49
Ramsey, NJ 07446
201-444-5700

Hybrid Arts
11920 W. Olympic
Los Angeles, CA 90064
213-826-3777

Key Clique
3960 Laurel Canyon
Studio City, CA 91604
818-905-9136

Korg U.S.A.
89 Frost St.
Westbury, NY 11590
800-645-3188

Mid-Ease
3650 NW 37th St.
Fort Lauderdale, FL 33309
305-486-4799

Mimetics
PO Box 60238, Station A
Palo Alto, CA 94306
408-741-0117

Moog Electronics
2500 Walden Ave.
Buffalo, NY 14225
716-681-7200

Passport Designs
625 Miramontes St., Suite 130
Half Moon Bay, CA 94109
415-726-0280

Roland Corp., U.S.
7200 Dominion Circle
Los Angeles, CA 90040
213-685-5142

Sonic Access
PO Box 4024
Santa Clara, CA 95054
408-942-9061

Sonus
21430 Strathern, Suite H
Canoga Park, CA 91304
818-702-0992

Triangle Audio
PO Box 1108
Sterling, VA 22170
703-437-5162

Ultimate Media
275 Magnolia Ave.
Larkspur, CA 94939
415-924-3644

Valhala Software
205 E. Hazelhurst
Ferndale, MI 48220
313-548-5754

This list was compiled in part from The IMA Bulletin, *International MIDI Association, 11857 Hartsook St., North Hollywood, CA 91607.*

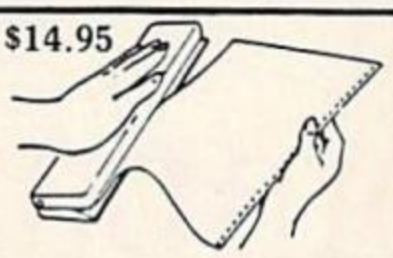
http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

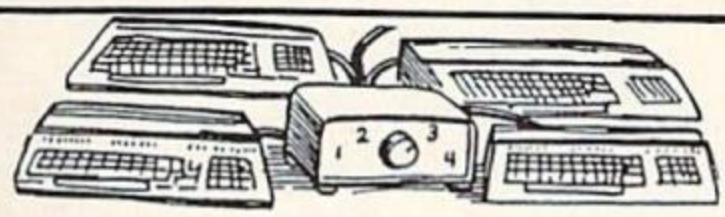
http://www.oldgamesitalia.net/

Our Prices Will Get Your Attention

"THE STRIPPER" $14.95

The "Stripper" quickly without effort removes perforated edges from computer paper. Insert 1 to 20 sheets, presto the edges are gone. Clean, quick, perfect every time.





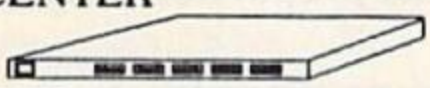
POWER SUPPLIES

C-64, Dependable heavy duty replacement power supply NON-repairable. Output: 5VDC, 1.7A, 9VAC, 1.0A **$29.95***

C-64, CPS30, Fused, repairable, all-metal case, 1 year warranty. Output: 5VDC, 2.0A, 10VAC, 1.0A **$39.95***

C-128 CPS-128, 3 sockets with spike suppression, EMI/RFI filtering, lighted on-off switch, fused, repairable, all metal case, 1 yr. warranty. Output: 5VDC, 6.0A, 10VAC, 2.0A **$79.95***

POWER CENTER $59.95



The POWER CENTER provides individual control of up to 5 components plus master on or off switch. EMI filtering, surge/spike protection, 15 AMP breaker, lighted rocker switches, heavy duty cable with 3 prong plug, 20 gauge steel case. Size: 1⅜ H x 12¼ D x 15 W.

MODEM RS-232 INTERFACE $29.95

Now you are no longer limited to Commodore modems only. Use any standard Hayes compatible RS-232 modem with your VIC-20, C-64, or C-128. Comes with a six foot cable.

BLACK BOOK of C128 $15.95

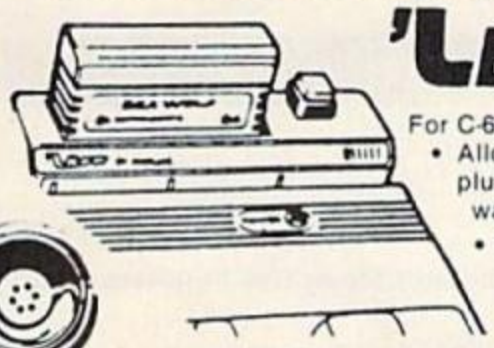
The best friend a C128 owner ever had. . . Includes C-64, C-128, CPM 3.0, 1541, 1571 disk drives. 261 pages, each chapter color coded for fast reference, 75 easy to read charts and tables, understandably written. The Black Book of C-128 is very much like a dictionary, always ready to answer your questions.

40/80 COLUMN CABLE $21.95

One cable for both 40 or 80 columns for the C128. Flip a switch to change modes. Plugs to back of monitor for a clear picture. 16 colors in 40 column, black/white in 80. Not for RGB monitors or TV sets.

PROTECTION REVEALED $15.95

Now in its sixth printing!!! A beginners guide to software protection. Written to give you a fundamental understanding of a disk and BASIC protection. Identify what you are seeing when examining a disk. Become a master of illusion. Reveals countless tricks and tips that mystify the user. The book is 141 pages and includes a free disk of 21 utility programs.



'LBow

For C-64 and C-128

- Allows one cartridge on the top, plus a port in the back for hardware access.
- Built-in reset button

$19.95

VALUE SOFT INC. *New Address*

3641 S.W. Evelyn St., Portland, OR 97219

1-800-544-SOFT

For questions or Oregon residents
call **503-246-0924**

DEALERS & SCHOOLS WELCOME

VSI

A word about AB switches. . .

Our AB switches allow you to share equipment rather than buy costly duplicates. Many configurations may be arranged, two computers to one disk drive and printer, or two printers to one computer. No need to ever plug and unplug cables again, just turn a knob to switch from one peripheral to another. Below are the types we have in stock, remember if you need extra cables, we carry a large selection.

$ SAVER SWITCH AB $29.95

VIC-20, C16, Plus 4, C-64, or C-128 compatible. Three female 6 pin sockets.

SUPER SAVER ABCD $79.95

VIC-20, C16, Plus 4, C-64, or C-128 compatible. 4 computers to 1 printer and/or disk drive. 5 female 6 pin sockets, one nine foot cable included.

CENTRONICS AB SWITCH $39.95

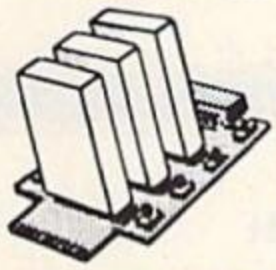
All 36 pins switched. Features 3 female sockets, gold pins, high quality push button.

CENTRONICS ABCD SWITCH $59.95

All 36 pins switched. Features 5 female sockets, gold pins, high quality rotary switch.

CABLES

Drive/printer 6 ft. 6 pin male to male	B66	$ 6.95
Drive/printer 9 ft. 6 pin male to male	B69	$ 8.95
Drive/printer 18 ft. 6 pin male to male	B618	$16.95
Drive/printer 9 ft. 6 pin rt. angle male/male	RA69	$ 9.95
Drive/printer ext. 6 ft. 6 pin male to female	A66	$ 6.95
Monitor 6 ft. 5 pin to 4 RCA plugs	M654	$ 9.95
Monitor 6 ft. 5 pin to 2 RCA plus	M652	$ 6.95
Monitor ext. 6 ft. 5 pin male to female	ME65	$ 6.95
Joystick extension 12 ft. male to female	JS12	$ 7.95
Joystick Y, 1 male to 2 female	JSY	$ 8.95
Power cable, 6 ft. male to right angle female	PR6	$ 9.95
Centronics 6 ft. 36 pin male to male	C6MM	$14.95
Centronics 6 ft. 36 pin male to female	C6MF	$14.95
Centronics 10 ft. 36 pin male to male	C10M	$19.95
RS-232 6 ft. 25 pin male to male	R6MM	$14.95
RS-232 6 ft. 25 pin male to female	R6MF	$14.95
IBM printer 6 ft. 36 pin/DB25 male to male	IBMP	$14.95



APROSPAND-64 $29.95

Give your C64 or 128 full expandability. This skillfully designed expansion unit plugs into the cartridge port, this gives you 4 switchable (single or in combination) cartridge slots, includes fuse protection and a reset button!

TWELVE PLUS $19.95

Now, a 12 inch extension cable for the cartridge port. Move your cartridges or expander boards to a convenient location. Place cartridges to the side of your computer, stop reaching to the back! Made of ribbon cable, just plug in. Now in stock

DISK DOUBLER **$6.95**

The original! All metal. Cuts an exact square notch in the disk, same spot every time! Now save data to the back too!

128 CABLE

40/80 col. for the 1701/1702 monitor.

$9.95

TERMS: Add $3.00 shipping, Power Center and Last Stand, add $5.00 each, items with *, add $4.00 each. Foreign orders, US funds, plus shipping. C.O.D. minimum $25.00.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

New Companions For the C-64

An updated FSD disk drive and a true proportional mouse and a RAM expander from Commodore are votes of confidence for the C-64.

The vitality of the C-64 has been evidenced recently by the appearance of three significant new hardware products to expand its capabilities. Two, the 1351 mouse and the 1764 RAM expander, are Commodore products that first appeared in public at the CES show in Las Vegas last January. The other is Emerald Components' FSD-2 disk drive, an update of their competitor to the Commodore 1541, that's been on the market for about a year. We reviewed the FSD-1 in our September 1986 issue, and it got high marks.

The current article was written by Tim Walsh, our technical editor, and John Premack, a frequent contributor to *RUN*. They carefully tested the products and have written informative reviews of them. Table 2 in the article lists the names of the manufacturers, their addresses and product prices. We hope you enjoy reading about the expanding horizons of the good ol' C-64.

THE FSD-2 EXCELERATOR + PLUS DISK DRIVE

by TIM WALSH

Commodore-compatible disk drives aren't nearly as plentiful as they were a few years ago. Consequently, the announcement of a new Commodore-compatible disk drive by a third-party manufacturer ensures plenty of excitement among C-64 and C-128 owners.

The newest Commodore-compatible on the market, the FSD-2 Excelerator + Plus, evolved from the popular FSD-1 disk drive, which still enjoys commercial success. Used by many Commodore computerists and sold through most Commodore mail order dealers, the FSD-1 gained popularity because of its high-quality design and nearly flawless compatibility with heavily copy-protected software. The Excelerator seems also to possess these characteristics.

THE HARDWARE

Like the FSD-1, the FSD-2 is housed in a sturdy, light-beige metal case that's less than half the size of a 1541. Two serial plugs on the rear allow interfacing to your system. Dual DIP switches located underneath the unit let you select the device number in the same manner as on the Commodore 1571 disk drive.

Unlike the 1541, the FSD-2 uses a separate 12-volt dc power supply. Because of this, the drive remains at ambient room temperature when in

PHOTOGRAPHED BY LARRY DUNN

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

use. As a result, any head misalignment should be attributed to reading, writing, formatting and validating disks, but not to internal heat buildup.

The FSD-2's distributor, Emerald Components International, claims that the biggest benefit their disk drive offers over the competition is that it loads files faster. In actuality, it's only ten percent faster than a 1541. The tale of the stopwatch lies in the accompanying chart (Table 1), which compares their load times. As you can see, the FSD-2's load times are minutely faster with noncopy-protected software, yet nearly identical when loading software that's copy-protected.

Compatibility

True to the distributor's word, I uncovered no software compatibility problems, which in turn indicates that attention to detail was obviously a concern in the mechanical design of the FSD-2. Externally and internally, the drive's construction seems to be of higher-than-average quality. In fact, my only complaint was that the label on the front of the drive was put on crooked!

While quite different cosmetically, the two drives are similar in other areas. Like the 1541, the FSD-2 stumbles over Basic 7.0's Boot command when loading a binary file with the C-128. Testing with the 1541's DOS 5.1 wedge revealed no incompatibility problems, and there was also no difficulty using Epyx's Fast Load cartridge.

Testing of CP/M version 3.0 on the new drive revealed no incompatibilities, either. Saving and loading CP/M files were performed without a hitch.

The manual that accompanied the review unit was thorough in describing how to use the drive, but I discovered errors and misspellings on several pages. An engineer at Emerald assures me that the documentation is being rewritten.

For a user wanting to upgrade from a 1541, deciding whether to purchase an FSD-2 or, perhaps, a Commodore 1571, is not easy. The 1571 lets C-64 owners access both sides of a disk without physically flipping the disk over. C-128 owners can not only access both sides of a disk, but also take advantage of the 1571's faster loading speed. The FSD-2 lacks both these attributes, yet it's about $50 cheaper. If the lesser price outweighs the 1571's advantages in your case, you can rest assured that the FSD-2 will do a fine job for you. ►

TABLE 1. FSD-2/1541 Comparison Chart.

C-128 Software	FSD-2	1541
PaperClip II	3 minutes, 05 sec.	3 minutes, 04 sec.
Fleet System II	0 minutes, 38 sec.	0 minutes, 37 sec.
RUN Script 128*	0 minutes, 49 sec.	0 minutes, 52 sec.
C-64 Software		
GEOS	0 minutes, 33 sec.	0 minutes, 33 sec.
Easy Script	1 minute, 02 sec.	1 minute, 03 sec.
Jet	3 minutes, 00 sec.	3 minutes, 00 sec.
Flight Simulator II	4 minutes, 32 sec.	4 minutes, 32 sec.
Miscellaneous Tests		
Load 132 block prg. file	1 minute, 29 sec.	1 minute, 26 sec.
Load 55 block prg. file	0 minutes, 40 sec.	0 minutes, 40 sec.
Format Disk	0 minutes, 55 sec.	1 minute, 21 sec.

*RUN Script 128 is the only program tested that is not copy protected.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

The Commodore 1351 Mouse

by JOHN PREMACK

The introduction of Commodore's 1351 mouse signals the beginning of a new era in effortless communication between Commodore users and their computers. Similar to the earlier 1350 mouse in appearance only, the 1351 is a true proportional mouse, not merely a rolling joystick. Also unlike the 1350, which can send only joystick-style, on-and-off signals to your computer, the 1351 actually measures the distance it has travelled, remembers the distance and direction with a built-in microprocessor and passes this information along to the computer at a convenient time, without interrupting other program tasks.

Molded out of the same beige plastic as the C-128 and 64C, the 1351 is a palm-sized rectangle (2½ × 4¼ inches) sporting two large pushbuttons and a four-foot tail that plugs into the computer's joystick port. It's operated with the narrow end that contains the pushbuttons under your fingertips.

Operation

When you slide the 1351 across a smooth, flat surface, a small ball that protrudes from the mouse's belly rotates. The ball's movement is monitored along both the X and Y axes by a pair of friction rollers, and they, in turn, spin two tiny slotted disks in the path of an electronic beam of light. The resulting pulses are timed, counted and stored by the mouse's microprocessor. The position of the mouse is always available to the computer as a value between 0 and 127 for each axis.

You can disable the Proportional mode if you wish. Just hold the right button down as you turn on your C-64, and the 1351 will come up in a joystick mode. This option is useful when the software you're using doesn't have a mouse-driver routine.

The user's guide that accompanies the 1351 offers three pages of instructions on the care and feeding of your new mouse and 15 pages of information for programmers. The programming section includes Basic and machine language driver listings for the C-64.

The mouse also comes with a two-sided program disk. Side 1 contains some simple demonstration programs that you can incorporate as input subroutines in your own programs.

Many publishers are preparing software that will make full use of the 1351's features, and Berkeley Softworks has provided a GEOS Upgrade kit on side 2 of the disk that comes with the mouse, so GEOS owners can use the device immediately. This special program installs version 1.3 of the GEOS operating system on an existing GEOS 1.2 boot disk. It also provides new versions of deskTop and geoWrite, as well as a mouse driver and several upgraded printer drivers.

GEOS Update

The instructions for installing GEOS 1.3 are easy to follow. Since GEOS 1.2 doesn't recognize input from the 1351, you must use a joystick or power up the 1351 in Joystick mode until the new operating system is running. Be sure to back up your boot disk before installing GEOS 1.3, because the upgrade program actually reformats the original disk.

Once you've booted GEOS 1.3, click the appropriate button at the select-input window, and click it again at the COMM 1351 icon. Then reset the mouse to Proportional mode. You need to unplug the mouse and reconnect it during the reset.

Be very careful in reconnecting the mouse when the computer power is on! The 1351's plug is unlike most others that connect to the joystick port. It's rimmed with metal instead of plastic, and it offers a unique opportunity to destroy your 64's CIA chip if you inadvertently touch the pins with the metal edge.

Instead of attempting to reset the 1351 with the power on, it's much safer to stay in Joystick mode and change the program default settings as described on page 2 of the instruction sheet. This way you can merely turn the computer off, so there's no risk of damaging any chips, and GEOS will reboot with the 1351 ready to go.

Aside from potential trouble from the metal-clad connector, my only other complaint with this product is that the GEOS mouse-driver soft-

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

ware doesn't allow fine enough movement. Sliding the mouse vertically only 2¼ inches moves the pointer from the top to the bottom of the screen, and 3¼ inches of lateral motion moves it all the way from side to side. While this amount of control is adequate for point-and-click applications, it makes using a program such as geoPaint a bit difficult.

You'll probably bury your joystick or 1350 in the bottom of a drawer once you've used the 1351. This is the device that GEOS users, in particular, have been waiting for. Make a little space on your computer table to give this mouse a new home.

THE COMMODORE 1764 RAM EXPANDER

by TIM WALSH

The months of waiting paid off last March when the 1764 RAM (random access memory) expander arrived in the *RUN* editorial offices. The expander is designed to plug into the user port of your C-64, whether the computer is a trusty five-year-old 64 or a sparkling new 64C, and boost its available memory by 256K, to a grand total of 340K.

The 1764 physically resembles the C-128 1700 and 1750 RAM expanders, and it works just as flawlessly. Leaving it permanently plugged into your 64's user port is no problem, because it doesn't interfere with any program or hardware operations.

Unfortunately, the 1764's design renders it incompatible with the C-128 in 64 mode. The expander's manual merely states this fact, and, being curious, I contacted Ed Parks, Director of Hardware Development at Commodore, to find out why. According to Parks, it's because the signal from one of the pins on the 1764 differs from the signal used by the 1700 and 1750 RAM expanders.

This incompatibility shouldn't be much of a problem to C-128 owners. They can access the 1700 and 1750 RAM expanders from C-64 mode, so they don't really need the 1764.

The power supply that accompanies the 1764 provides a much-needed hardware upgrade to the C-64. Everyone knows that the C-64's power supply generates energy levels more suited to digital watches—an amount nowhere near enough to operate a RAM expander for extended periods of time. The 1764's 3-amp replacement (essentially halfway between the power supply outputs of the C-128 and the C-64) solves the energy shortage problem.

ACCOMPANYING SOFTWARE

The 1764 also comes with a user's guide and a disk that contains RAM expansion utilities on one side and an upgrade program for GEOS on the other. The programs on the utility side include a DOS wedge that replaces the DOS 5.1 wedge, a program called RAMDOS, a file copier, a RAM expander diagnostic test, two animation demos and a drive-unit number-changing program.

The DOS wedge is needed so both the computer and the expander can recognize DOS wedge commands when you use the 1764 as a RAM disk.

RAMDOS is unique in letting you assign a drive-unit number to the 1764 RAM expander and use it as a high-speed, albeit volatile, disk drive. It displays the number of blocks of memory that remain free in the 1764 at the end of the expander's directory. With no programs stored in the memory, 2013 blocks are available for disk-file storage.

The diagnostic test, which takes about a minute to run, places status messages on the screen regarding the operation of the unit.

The animation demos provide a wealth of information for experienced users to study. Demo 1 displays a rotating planet Earth by using a series of bit-mapped screens. Demo 2, which also accompanies the 1700 and 1750 RAM expanders, creates a three-►

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

dimensional, sliding-bar display. The Programmer's Reference Notes with the manual also contains information of value to programmers who want to write for the RAM expander.

To make use of the RAM expander, you must access a memory location referred to as the RAM expansion controller, or REC. A short, well-documented Basic program in the manual shows how to save and read a low-resolution screen to and from the REC.

On the flip side of the utility disk there's an upgrade program that brings your copy of GEOS up to version 1.3. Of course, if you already have this, perhaps from buying the 1351 mouse, reviewed above, then you're just getting a duplicate with the 1764.

The four main programs on the GEOS side of the disk are called Upgrade, Grabber Upgrade, Merge Upgrade and geoDex Upgrade. They modify nearly every file on the GEOS disk, including the geoPaint and geoWrite files. Naturally, version 1.3 makes GEOS compatible with the 1764 expander and 1351 mouse. For accessing the expander, version 1.3 includes files that recognize the 1764 as a RAM disk.

The added RAM capabilities are most noticeable when using geoPaint. Earlier versions of GEOS required loading files from disk to view portions of a large graphics picture located off the visible screen. With GEOS 1.3, the same graphics picture will fit entirely in the 1764's memory, so you can move freely about the graphics picture without activating the disk drive.

As the demos prove, the 1764 RAM expander can handle entertainment and business software matching the performance of programs for 68000-based computers, especially in the area of RAM-disk graphics screens. Time will tell if this device will lengthen the C-64's life. I'm convinced it will. ■

TABLE 2. Manufacturers and prices.

Commodore 1351 Mouse, $49.95
Commodore 1764 RAM Expander, $149
Commodore Business Machines
1200 Wilson Drive
West Chester, PA 19380

FSD-2 Excelerator + Plus Disk Drive, $159
U.S. Distributor:
Emerald Components International
541 Willamette
Eugene, OR 97440
503-683-1154 or 800-526-5178

John Premack is a news photographer, freelance author and SYSOP for the Boston Computer Society Commodore Users Group's bulletin board. Tim Walsh is RUN*'s technical editor and has written numerous articles for the magazine.*

Copy Worldwide Short-wave Radio Signals on Your Computer

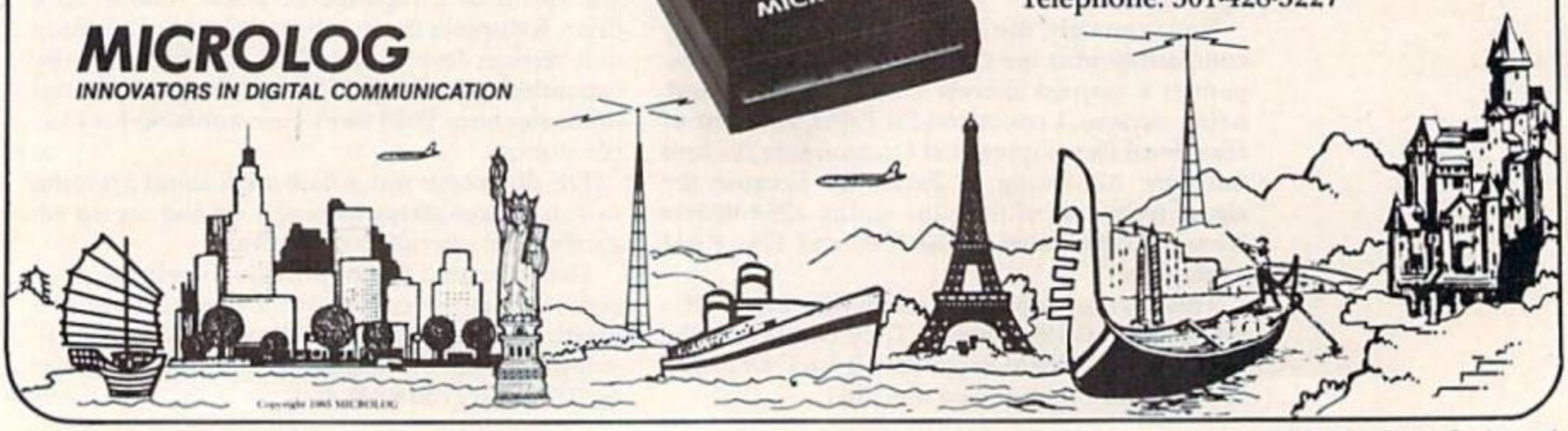
Remember the fun of tuning in all those foreign broadcast stations on the short-wave radio? Remember those mysterious sounding coded tone signals that baffled you? Well, most of those beeps & squeals are really digital data transmissions using radioteletype or Morse code. The signals are coming in from weather stations, news services, ships & ham radio operators all over the world. Our short-wave listener cartridge, the "SWL", will bring that data from your radio right to the video screen. You'll see the actual text as it's being sent from those far away transmitters.

The "SWL" contains the program in ROM as well as radio interface circuit to copy Morse code and all speeds/shifts of radioteletype. It comes with a cable to connect to your radio's speaker/earphone jack, demo cassette, and an excellent manual that contains a wealth of information on how to get the most out of short-wave digital DXing, even if you're brand new at it.

For about the price of another "Pac-Zapper" game, you can tie your Commodore 64, 128 or VIC-20 into the exciting world of digital communications with the Microlog SWL. $64. Postpaid, U.S.

MICROLOG CORPORATION,
20270 Goldenrod Lane
Germantown, Maryland 20874
Telephone: 301-428-3227

MICROLOG
INNOVATORS IN DIGITAL COMMUNICATION



Circle 91 on Reader Service card.

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Accomplish more . . . in less time with the power and versatility of the ReRUN Disk

Useful Applications

- Word Processing
- Telecommunications
- Utilities
- Music
- Finance
- Databases
- Graphics
- Entertainment, and more . . .

All year long, ReRUN disks bring you pre-tested, high quality, ready-to-run programs for your business, home, and educational computing needs.

Save Time

No need to spend your time entering lengthy program listings from the magazine. ReRUN disks are ready to load and run. No typing. No trouble.

Each bimonthly ReRUN disk offers popular programs from two issues of *RUN* magazine. Programs designed specifically for your Commodore 64 or 128.*

Added Bonus

Plus you get BONUS programs never before published . . . plus hints and tips from the popular Magic column . . . and a documentation booklet with each disk.

ReRUN saves you money and time by increasing your computing productivity. For example, in previous issues ReRUN has helped our subscribers . . .

- ✓ write more effective letters and reports with our efficient low-cost word processor
- ✓ enhance the image of business presentations with eye-catching graphics
- ✓ manage your expenses, keep track of accounts, calculate the future effects of your present financial moves
- ✓ break the memory barrier. . . create a RAM disk by using the RAM expansion module for your C-128
- ✓ create documents with double-sided pages and columns of text
- ✓ print banners, signs, and mailing labels
- ✓ help your kids with their math and spelling
- ✓ and enjoy our challenging, exciting ReRUN games.

You can order ReRUN disks individually at $16.47 each, but for maximum savings sign up for one year and receive all six ReRUN disks and documentation booklets for only $69.97. You save almost $5 per disk!

To place your order immediately, call our 24-hour Toll-Free number

1-800-258-5473

(in NH, 1-924-9471).

*Commodore 64 and 128 are registered trademarks of Commodore Business Machines, Inc.

☐ **YES!** Help me put my Commodore to greater use. Send me a one year subscription to ReRUN (6 bimonthly disks and documentation booklets) for $69.97.

☐ May/June '87 single issue for $16.47 each

____ back issues at $16.47 each

_____ month _____ year _____ month _____ year

Prices include postage and handling. Please allow 4-6 weeks for delivery. Foreign Airmail, please add US $1.50 per disk. US funds drawn on US banks only.

☐ Payment Enclosed
☐ MasterCard ☐ American Express ☐ VISA

_____

Reduced Price! Save 30%

Signature _____

Name _____

Address _____

City _____ State _____ Zip _____

Each ReRUN disk covers two issues of RUN magazine. Shipment occurs after the second issue is published. First available back issue is Jan/Feb. '86.

To place your order immediately call our 24-hour Toll-Free number 1-800-258-5473
(in NH 1-924-9471)

Mail to: ReRUN, [illegible]

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Do you get lost in a chaos of thoughts when you're writing? Try a thought-processing program to get your ideas organized into an outline.

Outlining Your Thoughts

by JOHN PREMACK

Many professional writers, particularly news reporters, are able to organize a story mentally before committing it to paper. However, those of us who aren't professionals usually just write as the thoughts come and worry about organizing the material later. Then we often spend more time cutting, pasting and rewriting than we do completing the first draft.

Now there's help for those of us who are less than organized about our writing. It's the thought processor, a program that automatically organizes ideas into an outline.

This article reviews three thought processors available today, at least one of which should be suitable for every *RUN* reader: Broderbund's Thinking Cap, for the C-64; Country Road Software's BrainStorm 128, for the C-128 in 128 mode; and Kamasoft's Out-Think, for the C-128 in CP/M mode. Thinking Cap and Out-Think serve as word processors as well as thought processors, while BrainStorm is part of a package, called BrainTrust, that includes a separate word processor.

Thinking Cap

Thinking Cap, from Broderbund Software, is a thought processor that's suitable for even the inexperienced writer. It encourages the uninhibited flow of ideas by being virtually transparent in use. You pour out your thoughts while the program quietly arranges them in up to six levels of topics, then, when you're out of ideas, it's ready to print a neatly formatted formal outline of your work.

Thinking Cap operates in three modes: Brainstorm, Overview and Edit. Brainstorm mode actually creates the outline out of your free-flowing thoughts. It includes a cut-and-paste function for moving material around, and it renumbers the outline automatically when you add or delete material.

Overview mode lets you step back and see what you've done. You can scroll through your entire outline, or you can instruct Thinking Cap to hide subtopics and concentrate only on the major headings.►

ILLUSTRATED BY PAUL MOCK

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Edit mode is for revising your outline or expanding on individual ideas. It includes an insert function so you don't type over material already in your outline, a "safe" buffer where a block of text can be held until needed and a search function for quickly locating a word or phrase and replacing it as desired.

Thinking Cap's 50-page user's guide introduces the program's functions in an easy-to-follow fashion, and you'll find the reference card and pop-up help menu handy if you have questions while using the program. The help menu appears at the touch of the Commodore key and drops out of sight again as soon as you release the key.

Thinking Cap is menu-driven. The easy-to-use, three-level menus zoom in and out in a window on the screen, and you make choices by moving a highlight bar with the cursor keys, then hitting the return key. Ease of operation is further enhanced by the uncomplicated command sequences.

Saving and Printing

Your outline is saved to disk as a user file. The program checks to see whether there's already a file on the disk with the same name, in which case the earlier file can be automatically renamed as a backup before the current document is saved. You can save individual sections of an outline in separate files, and recall and insert them into other outlines. It's also possible to append outlines to each other.

Thinking Cap's printing capabilities rival those of any word processor. Page length, margins and paragraph indentation are all adjustable from a page-layout menu, and the program can be readily customized to work with various printers. You can print your outline in the traditional successive-indent format with either Roman or Arabic numerals, or with hanging indentation and technical-style numbering (1, 1.1, 1.1.1, and so forth).

Using a combination of Thinking Cap's Prose option and its Edit mode, you can turn your outline into a full-fledged report by expanding each brief item into a complete sentence or paragraph. During this process, you can still scan the outline in condensed form and remove all reference numbers from the screen display.

I enjoyed using Thinking Cap, but it does have a few minor problems. First, to boot the program you must turn your C-128 into a C-64, including making your 1571 emulate a 1541. I found that pressing the 128's reset button and the Commodore key simultaneously is the best way to do this. Second, while I was

The pop-up help screen, accessed by the Commodore key, is a handy device in Thinking Cap.

able to call up Thinking Cap's user files with several utilities as well as my favorite word processor, the embedded reference numbers make the files next to impossible to use with other word processors. Finally, the cut-and-paste function is unnecessarily slowed by the need to confirm each instruction.

Thinking Cap would be a worthwhile investment for students, business people and anyone else with a need to draft a fairly complex report. It definitely helps organize thoughts and takes the pain out of creating an outline. The fact that it can be used as a word processor is a nice bonus.

Brainstorm 128

BrainStorm 128, from Country Road Software, is the thought processing half of BrainTrust, a dual-function thought and word processing package. A version of BrainStorm for the C-64 was published in the November 1985 issue of *RUN*. In this new version, author Mark Jordan has simplified and at the same time expanded on the original.

Let your mind do the creating and your fingers do the talking while Brainstorm does the organizing.

BrainStorm recognizes that the creative flow of ideas from your brain to your fingertips is a tentative process that can't be easily switched on and off. To encourage this flow, the Idea Entry mode works in a delightfully easy manner. All you have to do is hit the F1 key and type.

BrainStorm accepts 100 raw ideas of up to 68 characters each. When your burst of creativity is exhausted, the escape key delivers you to the Compare mode, where sorting occurs based on decisions you make about the relatedness of your thoughts. The thoughts are displayed on the screen in pairs, and you specify whether they're related, not related or not worth keeping at all. Then the program jumps to a menu screen with your thoughts already grouped under as many as nine headings.

From the menu you can go to an outline composed of labels arranged in a tree-like shape. Your task here is to use on-screen prompts to compose headings for the branches and to rearrange your thoughts if you wish. You can add and delete branchlets, as well as augment detail by subdividing them. Deleted thoughts don't just disappear; they're placed in a buffer from which they can be recalled if you change your mind.

On Automatic Pilot

A special BrainStorm function, Automatic Pilot, checks your outline to make sure you've composed a heading for each branch and that no division or subdivision contains just one further subdivision; there must always be at least two items on a level. Parallel construction—using similar word structure in more than one phrase or clause—is encouraged by on-screen prompts.

You can print your outline at any time by hitting the F4 key. However, to use special printer features, you must boot up BrainPower, BrainStorm's companion word processor, and recall the outline from disk. BrainPower offers no choice of printer modules, but it does accept escape codes embedded in the text. This approach is clumsy for working with documents, but it should be only a minor nuisance for printing outlines, since you probably won't need any font changes. I had no trouble printing through a Cardco G-Wiz interface to my Gemini 10-X and Juki 6100 printers.

The version of BrainStorm 128 that I tested had a few bugs. The help key wouldn't work until I discovered that it

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

had to be followed by a return. Of greater concern was my discovery that, despite assurances in the user's guide, my outline was *not* automatically saved when I hit the F7 key to access BrainPower. In fact, exiting to Basic or BrainPower totally wipes out an outline if you don't save it first. Similarly, I found that the contents of the buffer aren't saved to disk along with the outline.

Other shortcomings include an inability to move ideas on the screen to another level without typing them in again and to list newly entered ideas while working in the Subdivide mode. Also, my efforts to leave Automatic Pilot by repeatedly hitting the escape key to cycle through the outline were futile.

Despite these flaws, BrainStorm is straightforward and easy-to-use. This program should be considered by anyone with relatively small writing chores. Its Compare and Automatic Pilot modes simplify the creation of a logical and readable outline and offset the software's shortcomings.

Out-Think

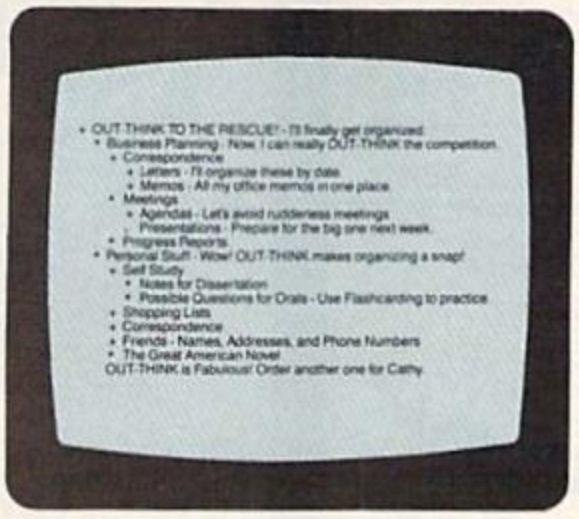
Kamasoft's Out-Think, a thought processor for 8-bit CP/M machines, is an industrial-strength creative tool that can travel from office to home and handle the chores in both environments with ease. It's designed to run from either a hard disk drive or floppies. If you're going to use floppies, you should have two drives to make the program function properly.

You'll need to copy the original disk to make a working version before you load Out-Think into your C-128. Also, make sure your 128 is in 80-Column mode before booting up the CP/M Plus operating system, because Out-Think won't run on a 40-column screen.

The extensive user's guide is initially overwhelming. However, it's possible to get started by just following the directions in the separate installation manual.

Type OT at the A > prompt to access the Topic Manager, the jumping-off place for all your creativity and housekeeping chores. You'll quickly discover that control/C is your passport to the various parts of the program, particularly the extensive help files. Control/C will also get you out of trouble if you enter an incorrect command.

Out-Think requires a fair amount of structure as you input ideas, and it may slow down your thought flow at first. However, you'll soon find that the keystrokes that precede each entry have become second nature. As you rapidly generate ideas, you'll also notice that Commodore's CP/M disk-operating system runs more slowly than dedicated Z-80- or 8080-based computers.


OUT-THINK TO THE RESCUE! - I'll finally get organized.
Business Planning - Now, I can really OUT-THINK the competition.
Correspondence
Letters - I'll organize these by date.
Memos - All my office memos in one place.
Meetings
Agendas - Let's avoid ruddereless meetings.
Presentations - Prepare for the big one next week.
Progress Reports
Personal Stuff - Wow! OUT-THINK makes organizing a snap!
Self Study
Notes for Dissertation
Possible Questions for Orals - Use Flashcarding to practice
Shopping Lists
Correspondence
Friends - Names, Addresses, and Phone Numbers
The Great American Novel
OUT-THINK is Fabulous! Order another one for Cathy.

Here's where those random thoughts led you: A completed outline, produced using Out-Think.

Two full-screen editors, one for outlines and the other for "leaves" of text that can be attached to outline titles, provide four ways to access files. If you're familiar with the command-key sequences of WordStar or Perfect Writer, you'll immediately be at home with these editors, since Out-Think can be configured to accept either standard. If both options are new to you, stick with the WordStar commands, because they're used in the examples in the user's guide.

Once you've composed an outline, Out-Think can compress it to give you an overview of its basic structure or expand it to show additional levels of detail. There's no limit to the number of items in a file or level, and there's no limit to the amount of detail in a file. As a practical matter, the only limits to Out-Think are the capacity of the storage disks and your imagination.

Once you're done with an outline, you're not necessarily done with Out-Think. This package is also a full-blown word processor capable of printing documents and exchanging files in both ASCII and WordStar formats. You can search through files for keywords or strings, create flash cards as study aids, define macros to suit your special needs and even lock files with up to three levels of password security.

Not for the novice or occasional user, Out-Think will repay your effort to learn its commands with more power than you'll probably ever need. You may not like this program until you've really learned it, but once you've learned it, you'll love it. ■

Editor's note: Mark Jordan, the author of BrainStorm 128, advises us that most bugs in the version reviewed here have been corrected in version 2.0, which he hopes will be available by the time this appears in print. Updates will cost $8 for owners of the first version.

John Premack, owner of five Commodore computers, is a news photographer, the SYSOP for the Boston Computer Society's Commodore Users Group BBS, and a book and magazine author on computer topics.

TABLE 1. Manufacturers and prices.

Thinking Cap
Broderbund Software
17 Paul Drive, San Rafael, CA 94903
C-64
$49.95

BrainStorm 128 (Part of BrainTrust)
Country Road Software
70284 C.R. 143, Ligonier, IN 46767
C-128 in 128 mode
$22 for BrainTrust, including shipping and handling; mail order only

Out-Think
Kamasoft, Inc.
PO Box 5549, Aloha, OR 97007
C-128 in CP/M mode; 1571 disk drive
$69.95

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

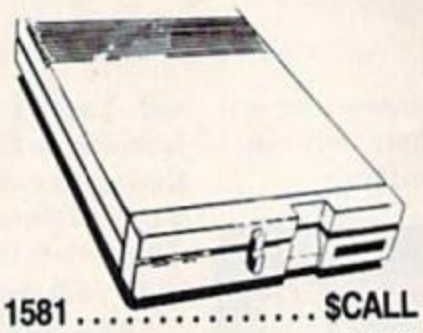
commodore

64c .....

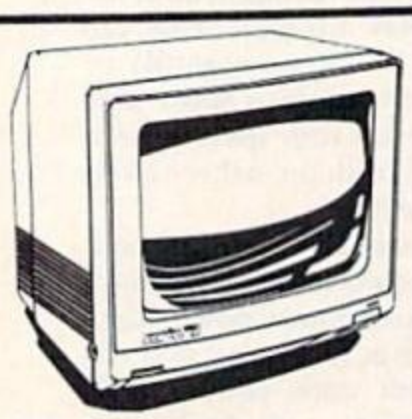
128 .....

128D .....$CALL

* package pricing



1581 ..... $CALL
1541c $169.95
1571 ..... $219.95



1901 (monochrome) ... $99.95
1802c $199.95
1902A $249.95

300 BAUD.....$ 28.00
OKIMATE.....$180.00
1351.....$ 39.95
QUANTUM LINK $2
1764 RAM .....$CALL

SIDECAR NOW AVAILABLE

AMIGA

500 .....$CALL

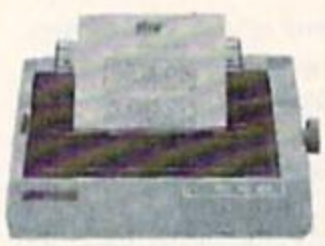
1000R $500.00*

1000 (new) ... $650.00

GENLOCK	$225.00	DIGI-VIEW	$140	1010 DRIVE	$200.00
1680 MODEM	$150.00	FUTURE SOUND	$125	2 MEG 20 MEG	$400.00 $800.00
256K	$80.00	MARUDER II	$24	1 MEG WITH CLOCK	280.00

*Refurbished by Commodore

star micronics PRINTERS



star micronics NP-10 *139.95

star micronics NX-10 or 10C *179.95

Power Type $159.95

star micronics NL-10 *229.95

star micronics NX-15 *299.95

*WITH PURCHASE OF TWO RIBBONS

commodore IBM COMPATIBLE

- 512K
- 360K Dual Sided Drive
- CGA Board
- One year warranty
- Parallel Port
- Serial Port
- GW BASIC
- DOS 3.2

Free SIDEKICK by Borland

PC10-1* $499.95

640K Dual Drive

PC10-2* $575.00

$550.00 Alone

$650.00 Alone

*With purchase of 1901 or 1902 A

20 MEG... $350 Seagate

30 MEG... $400

ORDERS ONLY 800-433-7756

CUSTOMER SERVICE 313-427-0267

HOURS (E.S.T.):
Monday thru Friday – 10:00 A.M. to 8:00 P.M.
Saturday – 10:00 A.M. to 6:00 P.M.

M.C.S.

MICROCOMPUTER SERVICES

DEALER INQUIREES INVITED

No Surcharge for MC/VISA/DISCOVER. Sorry no walk in traffic.

All returns must have RA #. Merchandise found defective will be repaired or replaced. All items are new. We do not offer refunds for defective products or for products that do not perform satisfactorily. We make no guarantees for product performance. Any money back guarantees must be handled direct , with the manufacturer. Call for shipping & handling info.

12864 FARMINGTON RD. • LIVONIA, MICHIGAN 48150

http://www.oldgamesitalia.net/

Circle 207 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Panasonic Industrial Company

KX-P1080*i* **$174.95**

$229.95 KX-P1091*i*

KX-P1092*i*

$299.95

KX-P1592

$399.95

SEIKOSHA

- w/2 ribbon purchase

SP180VC **$139.95***

SP1000VC **$149.95***

SEIKOSHA MP1300A1

300 CPS
10K Buffer
Parrellel + Seriel
50CPS N.L. Q

$349.95 Color Version $449.95

Avatex

1200 Baud $98
1200 Baud $120
Hayes Compatible
2400 Baud $220.00

DISKS & ACCESS.

MOUSE PAD	$6
CASIO CZ101	$250

3½ DS/DD (30 lot)	$1.30
3½ SS/DD (30 lot)	$1.00
5¼ DS/DD (100 lot)	$ .30

3½ DISK CASE (30)	$8
5¼ DISK CASE (75)	$8
DISK HEAD CLEANERS	$8

SPECIALS

Commodore Logo	$25
Accounts Rec.	$20
Silent Butler	$10
Xetec Interface	$CALL
Kwik Load	$5
Joy Sticks	from $5
Outlet Surg. Strip	$20

commodore 1520 COLOR Printer Plotter

$29.95

commodore Educator 64

149.95

Completely Commodore Compatible

commodore SFD 1001 (1 Meg)

$179.95

4040 ...$ CALL
8250 ..$ CALL*

commodore Hard Drives 9060

$450*

Mini Chief/Data Chief ....$ CALL

commodore PET

4023 .99.95*
8023 ..150*
8032 ..150*

*Completely Refurbished

AMIGA NEW RELEASES

X-rated Graphics Library	$ 15	Gizmoz 2.0	$ 42	Prowrite	$ 75	Earl Weaver Baseball	$CALL
Publisher 100	$120	Starglider	$ 27	Word Perfect	$240	Perfect sound	$ 48
Digipaint 2.0	$ 36	City Desk	$ 90	Laser Script	$ 27	Acquisition	$180
Faery Tale Adv.	$ 30	Galileo	$ 60	Surgeon	$ 36	Videoscape 3D	$120

ALL SOFTWARE *AT LEAST* 40% OFF

Bard's Tale	$24.00
Chessmaster 2000	30.00
Lords of Conquest	21.00
Marble Madness	24.00
Pegus	18.00
Moebius	24.00
Murder Party	21.00
Orge	24.00
Ultima IV	36.00
Ultimate Wizard	24.00
Bard's Tale II	24.00
Auto Duel	30.00
Scrabble	21.00
America's Cup	21.00
Artic Fox	24.00

MINDSCAPE

Defender of the Crown	NEW $21.00
Bop and Wrestle	18.00
Fist	18.00
Super Star Hockey	NEW 21.00
High Roller	18.00
Indoor Sports	18.00
Infiltrator	18.00
Halley Project	18.00
Parallax	18.00
Uridium	18.00
Luscher Profile	18.00

ACCOLADE

Hard Ball	Special $17.00
Fight Night	18.00
Dambusters	18.00
Law of the West	18.00
PSI 5 Trading Comp.	18.00
Kill Until Dead	18.00
Ace of Aces	18.00
Comics	18.00

PRECISION

Suberbase 128	~~$50.00~~
Suberbase 64	~~40.00~~
Superscript 128	~~40.00~~
Superscript 64	~~40.00~~

50% OFF

Berkeley Softworks

GEOS	Special $34.00
GEOS Fontpak 1	18.00
GEOS Desk Pack	21.00
Writer Work Shop	30.00
Geodex	24.00
GeoCalc/GeoFile	NEW 30.00
GeoCable	NEW 24.00

Abacus

GEOS In and Out	$9.00
Basic 128	$36.00
Basic 64	24.00
Cadpak 128	36.00
Cadpak 64	24.00
Chartpak 128	24.00
Chartpak 64	24.00
Cobol 64	24.00
Cobol 128	36.00
Super C Compiler 64/128	36.00
Super Pascal	36.00

Digital Solutions Inc.

Super Pack 64	Special $36.00
Super Pack 128	45.00
Pocket Writer 2/Filer/Planner	EACH 36.00
Super Pack 2 (128)	60.00
Pocket Writer 128/Filer/Planner	EACH 30.00
Pocket Writer 64/Filer/Planner	EACH 24.00

ACTIVISION

Portal	$24.00
Titanic	18.00
Labrynth	21.00
Aliens	21.00
Hacket	18.00
Hacker II	21.00
Little People	21.00
Game Maker	24.00
Music Studio	18.00

SPRINGBOARD

Certificate Maker	Special $28.00
Newsroom	$30.00
Clip Art 1	18.00
Clip Art 2	24.00

Firebird

Knight Ork	NEW $24.00
Colossus IV	21.00
Elite	18.00
Frankie Goes Holly	21.00
Pawn	24.00
Talking Teacher	24.00
Guild of Thieves	NEW 24.00

UNISON WORLD

Art Gallery	$16.00
Art Gallery 2	16.00
Print Master	21.00

HI TECH

Card ware	$6.00
Heart ware	6.00
Party ware	6.00
Ware with all	9.00

Broderbund Software

Printship	Special $25.00
Graphics Lib. EA	15.00
Carmen Sandiego	21.00
Karateka	18.00
Print shop comp.	21.00

TIMEWORKS

Data Mgr. 128	$36.00
Swiftcalc 128	36.00
Wordwriter 3	30.00
All business titles	36.00
Partner 64	36.00
Partner 128	42.00
Sylvia Porters	36.00

MicroProse

Gunship	Special $20.00
F-15	21.00
Acrojet	20.00
Kennedy Approach	21.00
Silent Service	24.00
Pirates	NEW 24.00
Top Gunner	18.00

Xetec, Inc.

Font Master II 64	$30.00
Font Master 128	36.00

MicroPlay

Micro L. Baseball	$24.00
General Mgr.	24.00
Stat Disk	15.00
'86 Team Disk	12.00

SSI

Gemstone Healer	$18.00
Gettysburg	36.00
Kampfgruppe	36.00
Phantasie 2	24.00
Ring of Zelfin	24.00
Road War 2000	24.00
Shard of Spring	24.00
Wizard's Crown	24.00

EPYX

FastLoad	Special $22.50
Movie Monster	24.00
Vorpol Kit	21.00
World Karate Champ	18.00
Summer Games II	24.00
Super Cycle	24.00
World Games	24.00
Football	24.00
Multi-Plan	24.00
Winter Games	24.00
Sub Battle	NEW 24.00

LOGIC

Flight Sim II	Special $28.50
Scenery Disk	12.00
Jet	30.00
Football	24.00
Baseball	30.00

ACCESS Software Incorporated

MACH-128	$28.50
Leaderboard	24.00
MACH-5	24.00
World Class leaderboard	Special 22.50
10th Frame	24.00
Exec Tournament	12.00
Tournament 1	12.00
Triple Pak	12.00
Famous Course	12.00

Circle 207 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

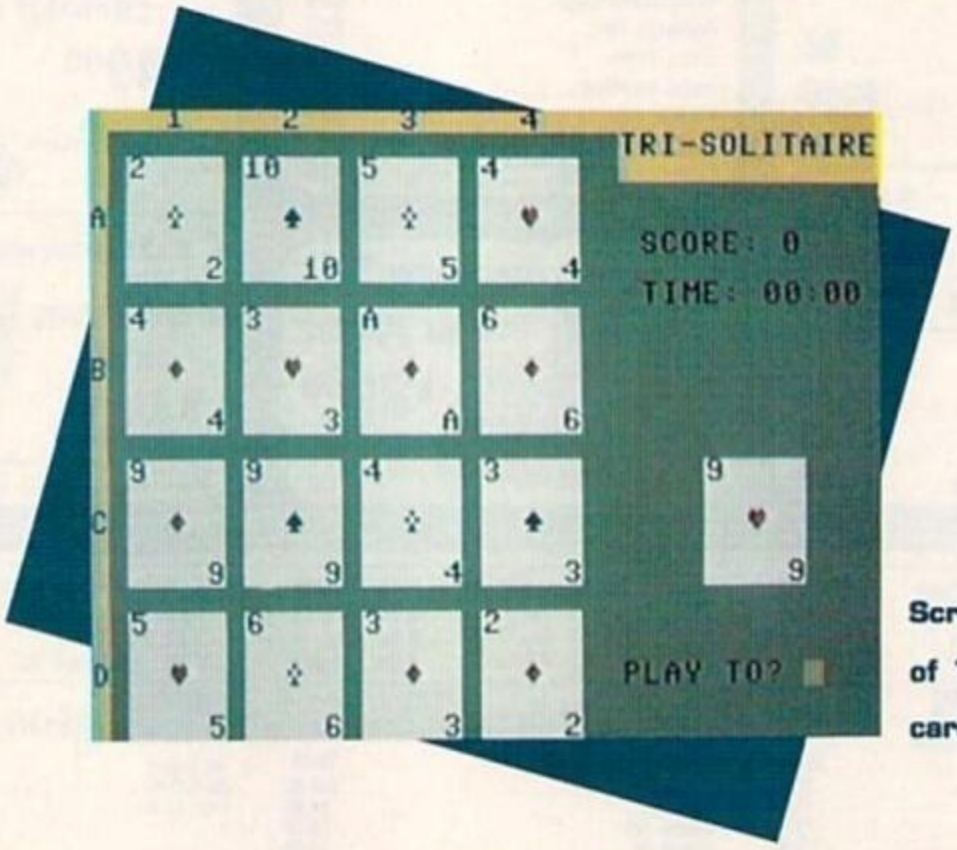
Tri-Solitaire

This new variation of an old game adds up to a good deal of fun.

by JIM and DEBORAH CHAMBERS

Tri-Solitaire is a fairly simple card game that still can be challenging, even to solitaire aficionados. The program (Listing 1) uses a regular 52-card deck with all the face cards removed, leaving 40 cards to play. Sixteen of the cards are dealt face up in a four-by-four pattern. (These are referred to as table cards.) The remaining 24 cards make up your hand.

The object is to play each card in your hand on a table card so that the total of the other three cards in the same row or column equals the value of your card or its value plus a multiple of ten. For example, if you play a seven, the total of the other three cards in that row or column must equal seven, seventeen or twenty-seven. Also, you can't play your card on a table card of the same value. Card suits don't matter, and aces always count as one.



Screen display of Tri-Solitaire card layout.

How To Play

At the start of each game, the program automatically shuffles the cards, then displays the table cards in the four-by-four pattern. The first card in your hand and a Play To? prompt are displayed to the right of the table cards. To play the card, you enter a two-digit command consisting of a letter (A–D) and a number (1–4), such as B3, which represents the location of the table card you want to replace.

If you make a good play, the card in your hand replaces the designated table card, and your score, displayed in the upper-right corner of the screen, is increased by one. The next card in your hand is then displayed.

If you make an incorrect play, an Illegal Move message flashes in place of the Play To? prompt, and everything on the screen remains the same. You can either try to play the card again or examine the next card in your hand by entering a ← (the left arrow key at the upper-left of the keyboard). By repeatedly entering this key, you can flip through and examine as many of the cards in your hand as you like.

You can play the cards in any order. The game is over when you reach a score of 24 or exceed the eight-minute time limit. To adjust the limit, just change the value of LM (line 130) and the word "eight" in line 346.

Note that this program won't run with some ROM cartridges installed, notably the disk fast-load type. If you have a problem running the program, try disconnecting these cartridges. R

Jim Chambers is a civil engineer for whom programming is an avocation. Deborah Chambers, an elementary school teacher, assists particularly with the music and sound routines of the family-generated programs.

LISTING 1. Tri-Solitaire program.

```
10Ø REM TRI-SOLITAIRE BY JIM &
    DEBORAH CHAMBERS    :REM*228
11Ø POKE56,56:CLR:CL$=CHR$(147)
    :PRINTCL$:POKE5328Ø,6:POKE5
    3281,Ø              :REM*172
12Ø PRINTTAB(12)CHR$(158)CHR$(1
    8)" TRI-SOLITAIRE "CHR$(146
    ):P=49152:Q=P+23    :REM*158
13Ø DIMP(4,4),CC(4,4),CS(3,4Ø),
    D(13):X=RND(-TI/37):DC=5427
    2:LM=8              :REM*244
14Ø POKE53282,1:POKE53283,7:FOR ►
```


http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

UTILITIES UNLIMITED

12305 N.E. 152nd Street
Brush Prairie, Washington 98606

VISA, M/C accepted.
If you wish to place your order by phone, please call **206-254-6530**. Add $3.00 shipping & handling on all orders; additional $2.00 for C.O.D.

Parameters R' Us Super Nibbler 64

NEW

Utilities Unlimited has done it again. A brand new Nibbler at the best price available. This package comes with 50 high quality parameters, Super Nibbler, and the Super Fast file copier.

You get all this for just **$24.95**

Parameters R' Us Super Nibbler 128

NEW

Super Nibbler is a fast, reliable 2-sided 128/1571 produced by one of the best programmers anywhere. This package includes 50 of the latest parameters offered by Utilities Unlimited.

All this for **$24.95**

Parameters R' Us Super Nibblers 64/128

NEW

For those of you who need both Super Nibblers this is the ultimate package. This package includes Super Nibbler 64, Super Nibbler 128, Super Fast file copy, and 100 of our best Parameters . . .

For just **$29.95**

Parameters R' Us 100 Pack Volume #1

The Original. You get 100 of the best Parameters . . . Anywhere . . . these parameters are professionally done, easy to use, and menu driven for fast, reliable performance. This package will remove all protection. Included are titles from Epyx,, Electronic Arts, Accolade, Mindscape, Broderbund, SSI, Activision, Berkeley, Access, Springboard, and Microprose plus many more. Volume #2 is now available for the same low price: **$19.95**. These are all quality products—**no filler or junk**. These are the same parameters that are included in the Super Nibbler Packs.

$19.95

Diagnose64 ★

An extremely helpful diagnostic tool. Diagnose64 is quick and easy to use. Just select the tests you want to perform using the switches, plug Diagnose64 into the cartridge expansion slot, turn on the C64, and Diagnose64 peforms its tests. That's all there is to it.

Functions:

- MPU Test
- RAM Test
- ROM Test
- Ports Test
- Repeat Testing

128 version also available.

$149.95

Parameters R' Us 10 Pack

These are early releases of the next 100 pack. These will be available every 2 to 3 weeks or whenever there are 10 good new software releases available for the C-64/128. So if you can't wait for the next volume, call us—we'll tell you what the next 10 pack has on it and

you can own it for just **$4.99**

Parameters R' Us Geos Pack

This No. 1 seller will standardize your Geos with your or anyone else's Geos—utilities, application, and tools. Parameters are included for Fontpack1, Deskpack1, Writers Workshop, Geodex, and as soon as released, Geocalc and Geofile wll be included for the

unbelievable low price of **$9.99**

Capture ★

Copyright 1986 Jason-Ranheim.
Take control of your C-64/128 with this easy-to-use cartridge. Although not as powerful as The Final Cartridge, **Capture** will back most of your valuable software. It is nonetheless an excellent purchase

at just **$39.95**

Repairable Power Supply	$39.95
Nonrepairable Power Supply	$29.95
Reset Board	$ 6.95
Disk Notcher	$ 5.99
Key Leaderboard	$ 4.99
Key 10th Frame	$ 4.99

Lock Pik C64/128 (The Book)

Lock Pik 64/128 was put together by Utilities Unlimited as a tool for those who have a desire to find out how the heavy hackers do it. This package includes:

1. Lock Pik book that gives you step-by-step instructions on **breaking** or backing up over 100 popular programs using Hesmon and Superedit. The instructions are so clear and precise that anyone can use it.
2. Lock Pik disk has Hesmon 64, Superedit, Disk Compare, Kernal Save, I/O Save, and Disk File log with detailed instructions on how to use these programs all on one disk.
3. We also have a limited supply of Hesmon cartridges that will be given out free while supply lasts.

I think you will agree this is the best buy to come along in a long time . . .

You get it all for **$29.99**

Parameter Kruncher

Takes the protection out of Keymaster keys and Fast Hackem parameters and allows you to compile 600 keys and/or parameters on a disk.

$9.99

XXXX Rated Game Disk XXXX ★

Copyright 1985 Megasoft Limited.
This is a very unusual game to be played by very open minded adults. Included in this game is a casino and a house of ill repute. JOYSTICK REQUIRED.

$24.95

XXXX Rated Graphics Data Disk XXXX

Copyright 1985 Megasoft Limited. ★
Again this is a very unusual although very popular data disk that works with Print Shop and Print Master. Please, you must be 18 to order this program.

$24.95

Photocopy ★

Copyright 1986-87 Megasoft Limited.
A graphics integration program. Photocopy works with a variety of files from hires programs including Doodle, Flexidraw, Print Shop, Newsroom and Graphics Basic.

$24.95

The Final Cartridge C-64/128 ★

The No. 1 selling utility cartridge in Europe. After reviewing all utilities of this type including Icepick, Capture and Super Snapshot, we have determined that **The Final Cartridge** is just that: ***the last cartridge you will ever need!*** **Extensive** programming utilities for the beginner as well as the hardcore programmers. The most impressive memory-to-disk backup utility we have ever seen. With the **press of a button** we were able to copy almost every program we tried.

$47.97

SOFTWARE SUBMISSIONS INVITED!

We are looking for hacker stuff . . . parameters, print utilities, telecommunications and the unusual.

★ **Policy statement concerning sale of third party software:** Utilities Unlimited will bring you the best possible utilities available, and this means from time to time we will offer exceptional utilities and unusual programs from other sources. **ORDERS TAKEN 24 HOURS A DAY**

Circle 187 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

TRI-SOLITAIRE

```
    I=1TO5:PRINT:NEXT:PRINTCHR$
    (5)"RULES:":PRINT  :REM*118
15Ø PRINT"THIS GAME IS PLAYED W
    ITH ONE REGULAR"   :REM*88
16Ø PRINT"DECK WITH FACE CARDS
    REMOVED. SIXTEEN"  :REM*94
17Ø PRINT"CARDS ARE DEALT ON TH
    E TABLE. THE"      :REM*42
18Ø PRINT"REMAINING CARDS ARE Y
    OUR HAND. THE      :REM*144
19Ø PRINT"OBJECT IS TO PLAY EAC
    H CARD IN YOUR"    :REM*62
2ØØ PRINT"HAND ON A TABLE CARD
    SO THAT THE TOTAL" :REM*62
21Ø PRINT"OF THE OTHER THREE CA
    RDS IN THAT ROW OR":REM*198
22Ø PRINT"COLUMN EQUAL THE VALU
    E OF YOUR CARD OR" :REM*32
23Ø PRINT"ITS VALUE PLUS A MULT
    IPLE OF TEN. YOU"  :REM*252
24Ø PRINT"MAY NOT PLAY YOUR CAR
    D ON A CARD OF THE":REM*21Ø
25Ø PRINT"SAME VALUE. SUITS DO
    NOT MATTER, AND"   :REM*156
26Ø PRINT"ACES ALWAYS EQUAL ONE
    .":FORI=PTOP+4Ø:READD:POKEI
    ,D:NEXT            :REM*195
27Ø FORI=1TO4:FORJ=1TO4:P(I,J)=
    1188+(I-1)*24Ø+(J-1)*6:NEXT
    :NEXT:GOSUB1ØØØ    :REM*2Ø1
28Ø PRINTCL$:PRINTCHR$(5)"TO SP
    ECIFY THE TABLE CARD THAT Y
    OU WISH"           :REM*37
29Ø PRINT"TO PLAY ON, ENTER A T
    WO DIGIT COMMAND,"  :REM*79
3ØØ PRINT"A LETTER (A-D) PLUS A
     NUMBER (1-4)."    :REM*147
31Ø PRINT"YOU CAN EXAMINE THE C
    ARDS IN YOUR HAND" :REM*119
32Ø PRINT"BY PRESSING THE "CHR$
    (34)CHR$(95)CHR$(34)" KEY A
    ND <RETURN>."      :REM*61
33Ø PRINT"YOU MAY PLAY YOUR CAR
    DS IN ANY ORDER."  :REM*135
34Ø PRINT:PRINT"A PERFECT SCORE
     = 24 POINTS.":PRINT
                       :REM*129
342 PRINT"THERE ARE TWO VERSION
    S OF THE GAME:"    :REM*2Ø3
344 PRINT" 1. NOVICE: NO TIME L
    IMIT."             :REM*63
346 PRINT" 2. EXPERT: TIME LIMI
    T OF EIGHT MINUTES."
                       :REM*163
348 SYSP,23,6:PRINT"YOUR CHOICE
     (1 OR 2)?":GOSUB1Ø1Ø:GOSUB
    115Ø               :REM*39
35Ø TT=VAL(A$):IFTT<1ORTT>2THEN
    348                :REM*93
36Ø POKE56334,PEEK(56334)AND254
    :POKE1,PEEK(1)AND251:SYSQ
                       :REM*7
37Ø FORI=14624TO14631:POKEI,PEE
    K(I+39144):NEXT    :REM*117
38Ø FORI=14632TO14639:POKEI,PEE
    K(I+3928Ø):NEXT    :REM*1Ø1
39Ø FORI=1464ØTO14647:POKEI,PEE
    K(I+39312):NEXT    :REM*153
4ØØ FORI=14648TO14655:POKEI,PEE
    K(I+3932Ø):NEXT    :REM*217
41Ø POKE1,PEEK(1)OR4:POKE56334,
    PEEK(56334)OR1     :REM*65
42Ø POKE53272,(PEEK(53272)AND24
    Ø)OR14:POKE53265,PEEK(53265
    )OR64              :REM*153
43Ø BL$="":FORI=1TO12:BL$=BL$+C
    HR$(32):NEXT:PL$="PLAY TO":
    IM$="ILLEGAL MOVE"  :REM*67
44Ø FORI=1TO13:READD(I):NEXT:SY
    =5:SX=34:P1=22:P2=27:TY=7:T
    X=34               :REM*23
45Ø S=Ø:GOSUB123Ø:FORI=1TO4Ø:CS
    (1,I)=I:NEXT       :REM*241
46Ø FORI=1TO4Ø:AA=I+INT((4Ø-I)*
    RND(Ø)):TP=CS(1,AA) :REM*57
47Ø FORJ=AATOISTEP-1:CS(1,J)=CS
    (1,J-1):NEXT:CS(1,I)=TP:NEX
    T                  :REM*235
48Ø FORI=1TO4Ø:NN=CS(1,I):IFNN<
    11THENCS(1,I)=NN:CS(2,I)=1Ø
    Ø:CS(3,I)=Ø:GOTO52Ø :REM*95
49Ø IFNN<21THENCS(1,I)=NN-1Ø:CS
    (2,I)=1Ø1:CS(3,I)=2:GOTO52Ø
                       :REM*91
5ØØ IFNN<31THENCS(1,I)=NN-2Ø:CS
    (2,I)=1Ø2:CS(3,I)=Ø:GOTO52Ø
                       :REM*167
51Ø CS(1,I)=NN-3Ø:CS(2,I)=1Ø3:C
    S(3,I)=2           :REM*191
52Ø NEXT:PRINTCL$      :REM*14
53Ø FORI=1Ø51TO1Ø63:FORJ=ØTO8ØS
    TEP4Ø:POKEI+J,16Ø:POKEI+J+D
    C,7:NEXT:NEXT      :REM*194
54Ø FORI=1Ø91TO11Ø3:POKEI,D(I-1
    Ø9Ø):POKEI+DC,Ø:NEXT:REM*48
55Ø FORI=1Ø5ØTO1Ø24STEP-1:POKEI
    ,16Ø:POKEI+DC,7:NEXT
                       :REM*112
56Ø FORI=1Ø64TO1984STEP4Ø:POKEI
    ,16Ø:POKEI+DC,7:NEXT
                       :REM*234
57Ø FORI=1TO4:POKE(I*6+1Ø22),I+
    176:POKE(I*6+1Ø22+DC),Ø:NEX
    T                  :REM*32
58Ø FORI=1TO4:POKE(I*24Ø+944),I
    +128:POKE(I*24Ø+944+DC),Ø:N
    EXT                :REM*94
59Ø FORI=1TO4:FORJ=1TO4:Z=P(I,J
    ):GOSUB1Ø3Ø:NEXT:NEXT
                       :REM*114
6ØØ C=Ø:FORI=1TO4:FORJ=1TO4:Z=P
    (I,J):C=C+1:GOSUB1Ø4Ø:CC(I,
    J)=CC:NEXT:NEXT    :REM*32
61Ø Z=1697:C=C+1:GOSUB1Ø3Ø:GOSU
    B1Ø4Ø:SYSP,SY,28:PRINT"SCOR
    E: Ø"              :REM*8
```


MONEY-BACK GUARANTEE ON QUALITY SOFTWARE

AIDS/LANGUAGES

Assembler/Monitor (Abacus)	$29
Basic Compiler 128 (Abacus)	49
Big Blue Reader (Sogwap)	28
Big Blue Reader CP/M	38
Cobol 64 (Abacus)	29
Cobol 128 (Abacus)	49
C Power 128/64	34
Gnome Kit 64/128 (Kira)	29
Gnome Speed (Kira)	49
Kyan Pascal 128 or 64 (Kyan)	60
How To Get Most GEOS Book	13
How To Get Most GEOS Disk	9
The Kernal 64 (Prism)	22
Physical Exam (Cardinal)	34
Scan 8 (ICC)	call
Super C 64 or 128 (Abacus)	49
Super Pascal 64 or 128 (Abacus)	49
Superkit 1541 (Prism)	25
Troubleshoot/Repair C64 Book	16

TELECOMPUTING

Bobsterm Pro 128 (Progressive)	68
Bobsterm Pro 64 (Progressive)	43
Dataquik 64 (Prism) NEW	26
Prototerm 128(B-Ware)	25
Sixth Sense 128 (Prism)	43
Sixth Sense 64 (Prism)	$34
Syntech BBS Const Set (Kira)	43

GRAPHICS & CAD

CAD 3D (IHT)	43
Cadpak 128 (Abacus)	49
Cybervideo (Touchstone)	34
Doodle (Omni)	34
Flexidraw (Inkwell)	84
Flexifont	26
Galleria-Borders/Clip Art	
Holiday, Maps, Animals, or Clip Art II Each	22
Graphic Integrator 2 (Inkwell)	26
Graphics Transformer (CDA)	29
Home Designer 128 (Kendall)	45
Moving Pictures (Aha!)	26
3D Perspectives II (Kira)	43
Printmaster Plus (Unison)	29
Art Gallery I or II	19

HOME & BUSINESS

Accountant 128 (KFS)	128
Industry Add-on Modules	59
BEST Business Management	call
CMS Accounting 128 (CMS)	139
Inventory 128	65
GEOS 64 (Berkeley)	42
FontPack! or DeskPack!	$22
Geofile, Geocalc or Workshop	39
GEODEX	29
Flexfile 128 or 64 (Cardinal)	43
Fontmaster 128 (Xetec)	49
Superpack 64 (Digital Solutions)	49
Superpack 2 (Digital Solutions)	78
Superbase 128 (Precision)	69
Visastar 128	69
Visawrite 128	69
Thoughtform 64 (Gollery)	26
Wordpro 128 with Spell	45

PERSONAL

Bodylink Products (Bodylog)	
Muscle Development	56
Cardio Exercise	74
Stress Reduction	92
Enhanced Stress	209
Crossword (Radarsoft)	15
Family Tree 64 or 128 (Genealogy)	42
Maps Europe (Radarsoft)	26
Maps USA or World (Radarsoft)	34
The Sexual Edge (Merrill)	20
The Dream Machine (Merrill)	26
Computer Classics (Strider)	9

!! F R E E !!
Strider's Computer Classics with order totaling $100 or more.

COMBINATION SPECIALS

How To Get The Most Out of Geos BOOK + DISK - **$20.**

Doodle + Moving Pictures - **$55.**

Geofile + Geocalc - **$75.**

Syntech BBS + Games Module - **$59.**

Any 3 Graphic Gallerias - **$60.**

Flexidraw + Flexifont - **$100.**

Flexidraw + Perspectives II - **$119.**

Superkit 1541 + Physical Exam - **$54.**

KFS Accountant 128 + **Any** Add-on Module - **$179.**

Computer Classics Disk - 3 or 4 - **$8** each/5 plus - **$7** each.

CALL US FOR OUR LATEST SPECIALS!!

ORDERING INSTRUCTIONS: VISA, MasterCard, Personal Check, Money Order or COD are welcome. Shipping USA: $3.00/ground, $5.00/2nd Day, $14.00/overnight. C.O.D. add $2.00. Canada/Mexico: $6.00 Air Mail. Foreign: $12.00 (for Air Mail use charge & specify maximum). PA residents add 6% sales tax. Include phone number and computer/drive model with order. All items will be shipped immediately. (If we are out-of-stock, we will let you know.)

For **CUSTOMER SERVICE** please call us: Monday thru Friday, 9:30 a.m. - 4 p.m. EST 1 - (215) - 683 - 5433

OUR PRODUCTS

We carry a complete line of Languages, Aids, Utilities, Telecomputing, Graphics and Home & Business Aids by Abacus, Best, BodyLog, Berkeley, Cardinal, CMS, Digital Solutions, Inkwell, KFS, Kira, Midnite, Prism, Proline, Radarsoft, Sogwap, Xetec and many more!!

OUR PRICES

Our prices are reasonably discounted, our shipping charges are fair and we have no hidden charges. Get even better prices with our specials!

OUR PROMISE

WE GUARANTEE YOUR SATISFACTION!! If, for any reason, you are not satisfied with your selection within 15 days of your receipt, simply return the product to us for a friendly refund of your purchase price.

Call or write for our **FREE CATALOG**, describing, in detail, over 100 fine products for your Commodore.

24 HOUR ORDER LINE
(215) 683-5433

BRiWALL
Solid Products • Solid Support
P.O. Box 129, Kutztown, PA 19530

Circle 73 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

TRI-SOLITAIRE

```
615 SYSP,TY,28:PRINT"TIME: ØØ:Ø
    Ø":TI$="ØØØØØØ"     :REM*199
62Ø SYSP,P1,P2:PRINTBL$:SYSP,P1
    ,P2:PRINTPL$;:PP$="":INPUTP
    P$:IFPP$<>"{LEFT ARROW}"THE
    N67Ø                :REM*1ØØ
63Ø GOSUB125Ø:IFFL>ØTHEN128Ø
                        :REM*25Ø
635 IFC=4ØTHEN62Ø       :REM*177
64Ø FORI=1TO3:T(I)=CS(I,C):NEXT
                        :REM*2Ø
65Ø FORI=CTO39:FORJ=1TO3:CS(J,I
    )=CS(J,I+1):NEXT:NEXT
                        :REM*19Ø
66Ø FORI=1TO3:CS(I,4Ø)=T(I):NEX
    T:Z=1697:GOSUB1Ø4Ø:GOTO62Ø
                        :REM*162
67Ø IFLEN(PP$)<>2THEN113Ø
                        :REM*62
68Ø Y$=LEFT$(PP$,1):X$=RIGHT$(P
    P$,1):Y=ASC(Y$)-64:X=VAL(X$
    )                   :REM*116
69Ø IFY<1ORY>4ORX<1ORX>4THEN113
    Ø                    :REM*6
7ØØ Z=P(Y,X):N=CS(1,C)  :REM*152
71Ø T1=Ø:T2=Ø:FORI=1TO4:T1=T1+C
    C(Y,I):T2=T2+CC(I,X):NEXT
                        :REM*3Ø
72Ø T1=T1-CC(Y,X):T2=T2-CC(Y,X)
    :IFN=CC(Y,X)THEN113Ø:REM*1Ø
73Ø IFT1=NORT1=N+1ØORT1=N+2ØORT
    1=N+3ØORT2=NORT2=N+1ØORT2=N
    +2ØORT2=N+3ØTHEN75Ø:REM*2Ø4
74Ø GOTO113Ø            :REM*28
75Ø Z=1697:GOSUB1Ø3Ø    :REM*138
76Ø Z=P(Y,X):GOSUB1Ø4Ø:CC(Y,X)=
    N:S=S+1:GOSUB125Ø:IFFL>ØTHE
    N128Ø               :REM*38
77Ø SYSP,SY,SX:PRINTS:IFS=24THE
    N117Ø               :REM*159
78Ø GOSUB115Ø:C=C+1:Z=1697:GOSU
    B1Ø4Ø:GOTO62Ø       :REM*129
1ØØØ SYSP,23,6:PRINTCHR$(18)CHR
    $(158)" PRESS ANY KEY TO C
    ONTINUE "           :REM*227
1Ø1Ø GETA$:IFA$=""THEN1Ø1Ø
                        :REM*41
1Ø2Ø RETURN             :REM*57
1Ø3Ø FORK=Z-82TOZ-78:FORL=ØTO16
    ØSTEP4Ø:POKEK+L,96:POKEK+L
    +DC,1:NEXT:NEXT:RETURN
                        :REM*146
1Ø4Ø CC=CS(1,C):CP=CS(2,C):FC=C
    S(3,C)              :REM*38
1Ø5Ø POKEZ-81,96:POKEZ-81+DC,1:
    POKEZ+81,96:POKEZ+81+DC,1
                        :REM*232
1Ø6Ø IFCC=1ØTHEN1Ø9Ø     :REM*246
1Ø7Ø IFCC=1THEN111Ø      :REM*254
1Ø8Ø POKEZ-82,CC+112:POKEZ-82+D
    C,Ø:POKEZ+82,CC+112:POKEZ+
    82+DC,Ø:GOTO112Ø    :REM*14Ø
1Ø9Ø POKEZ-82,113:POKEZ-81,112:
    POKEZ-82+DC,Ø:POKEZ-81+DC,
    Ø                   :REM*62
11ØØ POKEZ+81,113:POKEZ+82,112:
    POKEZ+81+DC,Ø:POKEZ+82+DC,
    Ø:GOTO112Ø          :REM*24Ø
111Ø POKEZ-82,65:POKEZ-82+DC,Ø:
    POKEZ+82,65:POKEZ+82+DC,Ø
                        :REM*138
112Ø POKEZ,CP:POKEZ+DC,FC:RETUR
    N                   :REM*78
113Ø SYSP,P1,P2:PRINTIM$:FORI=1
    TO1Ø:POKE54296,15:FORJ=1TO
    3:NEXT              :REM*34
114Ø POKE54296,Ø:FORJ=1TO2:NEXT
    :NEXT:GOSUB125Ø     :REM*214
1142 IFFL>ØTHEN128Ø      :REM*172
1144 GOTO62Ø             :REM*126
115Ø POKEDC+24,15:POKEDC+1,11Ø:
    POKEDC+5,9:POKEDC+6,9:POKE
    DC+4,17:POKEDC+4,16
                        :REM*21Ø
116Ø RETURN             :REM*198
117Ø FORI=ØTO15:POKE5328Ø,I:FOR
    J=ØTO1ØØ:NEXT:GOSUB12ØØ:NE
    XT:POKE5328Ø,6      :REM*92
118Ø SYSP,P1,P2:PRINT"PLAY AGAI
    N?";:GOSUB1Ø1Ø:IFA$="Y"THE
    NGOSUB123Ø:GOTO45Ø  :REM*3Ø
119Ø SYS5826Ø           :REM*62
12ØØ SYSP,P1,P2:PRINTBL$:FORK=Ø
    TO5Ø:NEXT:SYSP,P1,P2:PRINT
    " WINNER!"          :REM*17Ø
121Ø IFI/5=INT(I/5)THENGOSUB115
    Ø                   :REM*52
122Ø RETURN              :REM*2
123Ø PRINTCL$:POKE53281,12:SYSP
    ,12,6:PRINTCHR$(144)"SHUFF
    LING THE CARDS NOW..."
                        :REM*66
124Ø RETURN             :REM*22
125Ø FL=Ø:MM$=MID$(TI$,3,2):SS$
    =RIGHT$(TI$,2):MM=VAL(MM$)
    :TT$=MM$+":"+SS$    :REM*46
126Ø SYSP,TY,TX:PRINTTT$:IFTT=2
    ANDMM>=LMTHENFL=1   :REM*26
127Ø RETURN             :REM*52
128Ø FORI=1TO1Ø:SYSP,P1,P2:PRIN
    TBL$:FORT=ØTO1ØØ:NEXT
                        :REM*191
129Ø SYSP,P1,P2:PRINT"GAME OVER
    ":FORT=ØTO15Ø:NEXT:NEXT:GO
    TO118Ø              :REM*53
2ØØØ DATA 32,13,192,132,251,32,
    13,192,166,251,76,24Ø
                        :REM*235
2Ø1Ø DATA 255,32,253,174,32,158
    ,173,32,17Ø,177,96 :REM*15
2Ø2Ø DATA 16Ø,Ø,185,Ø,2Ø8,153,Ø
    ,56,185,Ø,2Ø9,153,Ø,57,2ØØ
    ,2Ø8,241,96         :REM*119
2Ø3Ø DATA 148,146,137,173,147,1
    43,14Ø,137,148,129,137,146
    ,133                :REM*89 ■
```


LIGHTHOUSE COMPUTERS PRESENTS . . .

PROFESSIONAL DOS (for the C-64)

A PRODUCT OF MIKROTRONIC MICHIGAN INC.

NEW

The Finest, Fastest Super Speeder

- Can load 202 block program files in under 4 seconds
- Adds useful commands to computer and drive
- Compatible to 99.9% of all commercial software
- Super fast disk access in modem operation
- DOS wedge with extra features and commands
- Filemaster: a fast, comfortable file copy program
- Integrated Centronics® interface for many printers
- Pre-programmed function keys
- No special formats needed
- Speed up Prg, Seq, and Rel files
- Can extend disks to 40 tracks

★ COMING SOON ★

1541C, 1571 versions

128 in 64, 128, and CPM

15 second backup

- Professional DOS **$119.95**
- Epson-compatible cable **$29.95**

SAVE $10.00!

- Order both for only **$139.95**

Please add $2.00 Shipping & Handling
Michigan residents add 4% sales tax

VISA • MASTERCARD • COD • MONEY ORDER

TO ORDER NOW, **CALL (313) 765-9656**
BY MAIL: Lighthouse Computers, 6740 S. River Rd., Marine City, MI 48039

INSTALLATION REQUIRED • 90 DAY WARRANTY
*Mikrotronics System Professional DOS — Trademark Pending

Centronics® is a trademark of Centronics, Inc.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

RUN it right: C-64; C-128 (in 40- or 80-Column mode); printer

Attention, Shoppers!

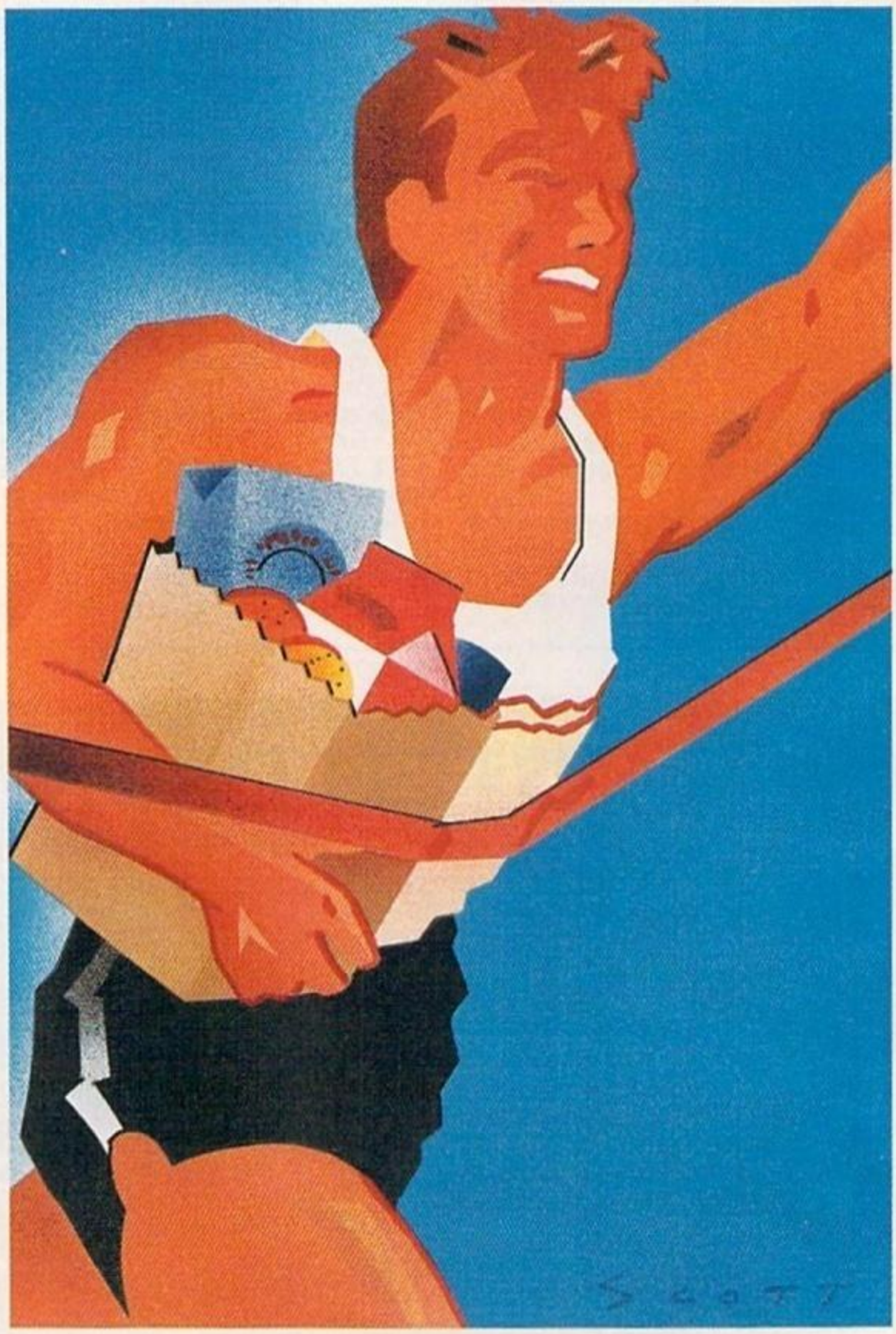
Whip your way through those long supermarket aisles with this time-saving 64 or 128 program.

by BOB KODADEK

Doing the weekly food shopping at the supermarket can be a long and tedious task, but now my Shopping List program can make your trips to the store faster and more efficient. It will let you "browse" through the aisles before you even leave home, compiling a complete shopping list arranged according to where products are located in the store.

To use the program, you establish, in the Data statements beginning at line 1000, a basic list of all items you might want to buy during any shopping trip. Each time you run the program to make a specific list, all these items appear in a succession of screen displays, and you specify the ones you want to buy on that particular day. The program saves those items in a sequential file you can call up to start your next shopping list. You can alter the basic list in the Data statements during any Shopping List session.

The printout you take to the store lists all the products you intend to buy, along with the quantity, unit price and total price for each, the aisle number where it's located and the total you'll have to pay at the cash register. If you enter products in the order you come to them in the store, they'll be listed that way, thus saving you considerable time in trips back and forth across the supermarket.



ILLUSTRATED BY BOB SCOTT

Compiling the List

Type in and save the program in Listing 1, giving it the filename Shopping List. It's important that you use this particular filename, as the program needs it during execution. I've included some preliminary Data statements in the proper format to show you how to set up your own. You'll have to make additions, deletions and alterations to them to match your needs.

In the first couple of weeks of using ►

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

MONTGOMERY GRANT

115 Nassau St Between Beekman & Ann Sts. N.Y., N.Y. 10038 (212)732-4500
open Mon-Fri 8:30am - 6:30pm Sat 9:30am - 6pm Sun 9:30am - 5:30pm

Penn Station/Amtrack Level Beneath Madison Sq. Garden, N.Y., N.Y. 10001
(212) 594-7140 open Mon-Fri 8:30am - 8pm Sat & Sun 9:30am - 7pm

PHONE and MAIL ORDERS CALL TOLL FREE **1(800)345-7059** IN NEW YORK STATE CALL (212)594-7140

ALL COMPUTERS & PERIPHERALS COME COMPLETE WITH AC ADAPTOR, OWNER'S MANUAL AND ALL CONNECTING CABLES.

ALL MERCHANDISE IS BRAND NEW AND FACTORY FRESH, COMPLETE WITH MFR. U.S.A. WARRANTY.

commodore C128

128 K RAM Powered Personal Computer **$235**

commodore C64C

64 K RAM Powered Home Computer *with GEOS Program* **$149.95**

commodore PC10-1

IBM, PC/XT Compatable
512K Ram Expandable to 640K
MS-DOS 3.2
Parallel and Serial Ports
Full 1 Year Warranty **$649.95**

PC10-2 640K Computer w/2 360K Drives..... **$769.95**

AMIGA

AMIGA 512K COMPUTER SYSTEM
Complete with 1080 Monitor

$1099.95

commodore COMPUTER PACKAGES
Get it all together & save!

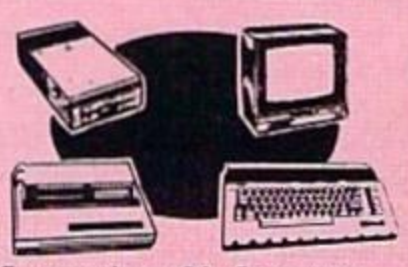
C64C COLOR PACKAGE

- Commodore 64C Computer
- Commodore 1541C Disk Drive
- Commodore Color Printer
- Color Monitor

With Geos Program!

$529.95

C64 COMPLETE PACKAGE



- Commodore 64 Computer
- Commodore 1541 Disk Drive
- Commodore Color Printer
- 12" Monitor

$369.95

Same pkg. w/C-64C $399.95

Color Monitor ADD $130

C128 COMPLETE PACKAGE

- Commodore 128 Computer
- Commodore 1541 Disk Drive
- 12" Monitor
- Commodore Color Printer

$499.95

To substitute 1571 for 1541 add $65.00

C128 DELUXE PACKAGE

- Commodore 128 Computer
- Commodore 1571 Disk Drive
- Commodore 1902 Color Monitor
- Commodore 80 Column Printer

$759.95

WE CARRY A FULL LINE OF SOFTWARE
FOR COMMODORE COMPUTERS AT DISCOUNT PRICES! Call Toll Free to Order

COMPUTER PRINTERS

commodore

MPS-803C Printer **129.95**
MPS-1000 Printer **199.95**
MPS-1200 Printer **229.95**

EPSON

HOME-WRITER 10 with Interface **189.95**

LX-86 Printer.....$219.95
FX-86 Printer.....$349.95
FX-286E Printer.....$469.95
LQ-800 Printer.....$469.95
PANASONIC 1080I.....$189.95

OKIDATA

OKIDATA 120 PRINTER....$199.95
OKIMATE 20 with Plug'n'Print.....$189.95

star

POWER TYPE
Daisy Wheel
Letter Quality

$169.95

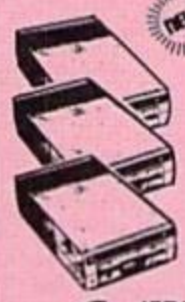
NB24-10	$469.95	SD-15	$399.95
NB24-15	$669.95	ND-15	$419.95
SG-10C	$179.95	SR-10	$429.95
NX-10	$189.95	SR-15	$469.95
NX-10C	$199.95	NR-15	$499.95
NX-15	$309.95	NB-15	$869.95
SD-10	$249.95		
NL-10 w/Commodore Cart	$249.95		

BLUE CHIP IBM® PC COMPATIBLE

512K Expandable to 640K
6 Expansion Slots
Optional 20MB Hard Drive
Blue Chip Keyboard
Disk Drive

$579.95

PERIPHERALS



NEW C1541C NEW Disk Drive **$165.95**

C1541 Disk Drive **$149.95**

C1571 Disk Drive **$214.95**

1902 RGB Color Monitor **$249.95**

1802 Color Monitor **$189.95**

GEOS Software.....$34.95
TU-803.....$34.95
XETEC Jr. Interface.....$39.95
XETEC Sr. Interface.....$59.95

"MAGIC VOICE" Module **$49.95**
1670 Automodem **$109.95**
1351 "Mouse" for any Commodore Computer **$44.95**
1700 128 K Expansion Module **$99.95**
1750 512 K Expansion Module **$169.95**

WE REPAIR YOUR COMMODORE COMPUTER and PERIPHERALS!

C-64,C-64/C	$39.95
C-128	$59.95
C-1541/1541/C Drives	$45
MPS-801,MPS-803 Printers	$39.95
MPS-1000,MPS-1200 Printers	$49.95
C-1702,1802,1902 Monitors	$69.95

90 Day Warranty on all repaired merchandise.

C128 Power Supply.....$39.95
C64,C64-C Power Supply....$29.95

WE INVITE CORPORATE & EDUCATIONAL CUSTOMERS

Certified check, Bank check, Mastercard, Visa, Am-Ex, Diner's Club, Carte-Blanche, Discover Card and C.O.D.s accepted. No additional surcharge for credit card orders. Non-certified checks must wait 4-6 weeks clearance. Money orders are non-certified checks. N.Y. residents add applicable sales tax. Prices and availability subject to change without notice--so call before placing your order. Not responsible for typographic errors. Return of defective merchandise must have prior return authorization number, or returns will not be accepted. IBM PC/XT are registered trademarks of International Business Machine Corp. All orders can be shipped Air Express--call for details.

http://www.oldgamesitalia.net/

Circle 98 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

SHOPPERS

Shopping List, take notes on prices and aisle locations as you do your shopping so you can add more items to the Data statements. Thereafter, you'll also need to keep track of price and location changes and alter the Data statements accordingly.

Adding Data Statements

As you add Data statements, keep line 1000 as the starting point for items located in aisle 1 at the store, line 2000 as the starting point for items in aisle 2, and so on for all the aisles in the store. There are four data items necessary for each product, the first two being name and price. Although I've included some leading zeroes in the prices to make the display neater, neither they nor trailing zeroes are necessary. The third data item is the quantity of the product you want, and the fourth is the number of the aisle where the product is located.

As you're working with the Data statements, keep in mind that line 40000 must always remain in the program. It signifies the end of the data to be read.

Making a Shopping List

When you run Shopping List, first it will ask, "Have you made any additions, deletions, or corrections? (Y or N)." This refers to the Data statements. If you have altered the Data statements, type Y to save and replace the program listing with the new Data statements. If you haven't changed them, type N.

Next, the first screen display of items in the Data statements will appear. The product list occupies the top of the display, and across the middle of the screen you'll see a line that includes the program title, messages about program operation, the "page" number of that screen display and the aisle in the store where the first item on the page is located. Note that the page number refers to the screen display only, not the printout; I assumed most shopping lists would fit on only one printout page. At the bottom of the screen there's a menu of keypress commands to use in creating your list.

You'll notice that some of the products are displayed in white, some in green. Those in white list a quantity of at least one. When you load the sequential file holding your previous shopping list, any items in it that are in addition to the Data statement items will turn white also. All the white items will appear in the printout, unless you decrease their quantity to zero (at which point they'll turn green).

The green items in the display have zero for a quantity and won't appear in the printout unless you change their amount to something other than zero. The maximum quantity for each product is nine.

The highlighted item in the display is where the cursor is resting.

List-Making Commands

To *increase the quantity* of the highlighted product, press the *cursor-right* key. If the starting quantity is zero, increasing it will add the item to your shopping list.

To *decrease the quantity* of the highlighted product, press the *cursor-left* key. Decreasing the quantity to zero will eliminate it from your shopping list.

To *browse* through the list of items on the current screen page by moving the highlight down, press the *cursor-down* key. At the bottom of the page, the highlight will wrap around to the top of the list.

To move to the *next screen page*, press the *return* key.

To display the *previous screen page*, press the *cursor-up* key.

To *print out* your list, press *P*.

To *load* into memory the sequential file containing your previous shopping list, press *L*.

To *save with replace* your current shopping list into the sequential file, press *S*.

To *view* the sequential file in memory, press *V*. As the list scrolls by, you can freeze it by pressing the space bar.

To *erase* the sequential file, press *E*.

Other Considerations

When using the Shopping List on a C-128 with an 80-column monitor, you can remove the first two Pokes in line 2 and use the space they leave to add the Fast command, without having to renumber the program. The Pokes are needed only to set the screen and border colors for the 40-column screen.

Also, when you use the Save and Load functions of Shopping List, be sure to make all additions to and deletions from the Data statements prior to starting a new shopping list. R

Bob Kodadek is a computer programmer and freelance writer.

LISTING 1. Shopping List program.

```
1 MA$=".ØØ":MO=64:KP=197:T$=CHR
  $(16):IFPEEK(4Ø96Ø)=ØTHENMO=1
  28:KP=212                :REM*59
2 POKE5328Ø,Ø:POKE53281,Ø:PG$="
  PAGE":AS$="AISLE":N$="DEMO SH
  OPPER":GOTO5             :REM*254
3 IFMO=64THENPOKE781,X:POKE782,
  Y:POKE783,Ø:SYS6552Ø:RETURN
                           :REM*215
4 POKE7,X:POKE8,Y:POKE5,Ø:SYS65
  52Ø:RETURN               :REM*156
5 V=3ØØ:DIMA$(V),B(V),Q%(V),S%(
  V):Y$="{COMD 6}":E$="{CTRL 2}
  ":PRINTCHR$(14)"{SHFT CLR}{5
  CRSR DNs}"Y$N$           :REM*45
6 PRINT"{CRSR DN}HAVE YOU MADE
  ANY ADDITIONS, DELETIONS, OR
  CORRECTIONS? Y/N"        :REM*2Ø8
7 IFPEEK(KP)=39THEN12      :REM*115
8 IFPEEK(KP)<>25THEN7      :REM*2Ø2
9 OPEN1,8,15:PRINT"SAVE @Ø:"N$:
  SAVE"@Ø:"+N$,8           :REM*239
1Ø INPUT#1,A$,B$,C$,D$:PRINTA$"
   ,";B$",";C$",";D$       :REM*216
11 PRINT"{CRSR DN}VERIFY "N$:VE
   RIFY N$,8               :REM*213
12 PRINT"{CRSR DN}OK, READING D
   ATA...":I$="ITEM":S$="TOTAL
   $"                      :REM*11Ø
13 A=A+1:READA$(A),B(A),Q%(A),S
   %(A):IFA$(A)<>"END"THEN13
                           :REM*195
14 CLOSE1:L=1:SU=Ø:AI=1:P=Ø
                           :REM*72
15 PRINT"{SHFT CLR}{CTRL 8}":X=
   17:Y=Ø:GOSUB3:PRINTN$SPC(6)P
   G$AI,AS$S%(L)           :REM*169
16 PRINT"{CTRL 6}{CRSR DN}CRSR
   RT = + "I$SPC(3)"CRSR LT = -
    "I$                    :REM*16
17 PRINT"CRSR DN = BROWSE"SPC(3
   )"CRSR UP = LAST "PG$
                           :REM*157
18 PRINTSPC(6)"P = PRINT"SPC(5)
   "RETURN = NEXT "PG$ :REM*214
19 PRINTSPC(6)"S = SAVE"SPC(11)
   "L = LOAD":PRINTSPC(6)"V = V
   IEW LIST";              :REM*1
2Ø PRINTSPC(6)"E = ERASE":X=1:Y
   =Ø:GOSUB3:F=Ø           :REM*17Ø
21 FORI=LTOL+14:IFI>ATHENA$(I)=
   "{8 SPACEs}"            :REM*157
22 PRINTY$;:IFQ%(I)THENPRINTE$;
                           :REM*242
23 PRINTA$(I)TAB(2Ø)Q%(I)" @"Y$
   TAB(3Ø);:N1=B(I):GOSUB65:PRI
   NT:NEXT                 :REM*89
```


http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

SHOPPERS

```
24 X=1:Y=Ø:GOSUB3:GOSUB42:F=Ø
                          :REM*32
25 D$="":GETD$            :REM*29
26 IFD$="{CRSR DN}"THENF=F+1:IF
   F<=14THENGOSUB43:L=L+1:GOSUB
   42:GOTO37              :REM*24Ø
27 IFD$="{CRSR UP}"ANDL>15THENL
   =(L-15-F):AI=AI-1:GOTO15
                          :REM*2Ø5
28 IFD$=CHR$(13)THENL=(L+15-F):
   AI=AI+1:GOTO15         :REM*13Ø
29 IFD$="{CRSR RT}"THEN44
                          :REM*255
3Ø IFD$="{CRSR LF}"THENGOSUB49:
   GOTO37                 :REM*182
31 IFD$="V"THEN53         :REM*155
32 IFD$="{CRSR DN}"ANDF=15THENG
   OSUB43:L=L-14:GOTO24:REM*116
33 IFD$="P"THEN38         :REM*185
34 IFD$="S"THENCM$="WRITING FIL
   E...":GOSUB48:GOSUB46:GOTO14
                          :REM*144
35 IFD$="L"THENCM$="READING FIL
   E...":GOSUB48:GOSUB47:GOTO14
                          :REM*111
36 IFD$="E"THENFORI=1TOA:Q%(I)=
   Ø:NEXT:GOTO14          :REM*82
37 GOTO25                 :REM*49
38 CM$="PRINTER READY? Y/N{19 S
   PACEs}":GOSUB48        :REM*48
39 R$="":GETR$:IFR$=""THEN39
                          :REM*233
4Ø IFR$<>"Y"THEN14        :REM*4Ø
41 P=1:GOTO53             :REM*141
42 Z$="{CTRL 9}"          :REM*188
43 GOSUB51:PRINTZ$+A$(L):Z$="{C
   TRL Ø}{CRSR UP}":RETURN
                          :REM*31
44 IFQ%(L)<9THENQ%(L)=Q%(L)+1
                          :REM*136
45 PRINT"{CTRL 2}{CRSR UP}{CTRL
    9}"A$(L)"{CTRL Ø}"TAB(2Ø)Q%
   (L)" @":GOTO25         :REM*221
46 OPEN1,8,2,"@Ø:S.LIST,S,W":FO
   RI=1TOA:PRINT#1,Q%(I):NEXT:P
   RINT#1:RETURN          :REM*144
47 OPEN1,8,2,"Ø:S.LIST,S,R":FOR
   I=1TOA:INPUT#1,Q%(I):NEXT:RE
   TURN                   :REM*189
48 X=17:Y=Ø:GOSUB3:PRINTE$CM$:R
   ETURN                  :REM*19Ø
49 IFQ%(L)THENQ%(L)=Q%(L)-1:GOS
   UB51                    :REM*5
5Ø PRINT"{CRSR UP}{CTRL 9}"A$(L
   )"{CTRL Ø}"TAB(2Ø)Q%(L)" @":
   RETURN                 :REM*152
51 PRINTY$;:IFQ%(L)THENPRINTE$;
                          :REM*39
52 RETURN                 :REM*11Ø
53 PRINT"{SHFT CLR}{COMD 8}":IF
   PTHENOPEN1,4:PRINT#1,SPC(3Ø)
   N$                     :REM*61
54 IFPTHENPRINT#1,SPC(5)I$SPC(1
   1)"QTY"SPC(6)"UNIT"SPC(7)"SU
   B"SPC(7)AS$            :REM*134
55 IFPTHENPRINT#1,SPC(5)"{4 COM
   D Ts}"SPC(11)"{3 COMD Ts}"SP
   C(6)"{4 COMD Ts}"SPC(7)"{3 C
   OMD Ts}"SPC(7)"{5 COMD Ts}"
                          :REM*13
56 FORI=1TOA:IFQ%(I)=ØTHEN62
                          :REM*16Ø
57 IFPEEK(KP)=6ØTHEN57    :REM*1Ø3
58 SQ=Q%(I)*B(I):SU=SU+SQ:IFPTH
   ENPRINT#1,A$(I)T$"2Ø"Q%(I);
                          :REM*186
59 PRINTA$(I)TAB(18)Q%(I)" @"TA
   B(25);:IFPTHENPRINT#1,T$"28"
   ;                      :REM*129
6Ø N1=B(I):GOSUB65:PRINTTAB(33)
   ;:IFPTHENPRINT#1,T$"39";
                          :REM*1ØØ
61 N1=SQ:GOSUB65:PRINT:IFPTHENP
   RINT#1,T$"5Ø"S%(I)     :REM*99
62 NEXT:PRINT"{CRSR DN}"S$;:IFP
   THENPRINT#1,CHR$(13)S$;
                          :REM*148
63 N1=SU:GOSUB65:PRINT:IFPTHENP
   RINT#1                 :REM*55
64 PRINT"{CTRL 9}PRESS RETURN";
   :SYS65487:GOTO14       :REM*96
65 D1=INT(N1):CT=N1-D1:CT$=MID$
   (STR$(INT((CT*1ØØ)+.5)),2)
                          :REM*97
66 CS$=LEFT$(MA$,3-LEN(CT$))+CT
   $:DL$=STR$(D1)+CS$:IFPTHENPR
   INT#1,DL$;             :REM*42
67 PRINTDL$;:RETURN       :REM*141
1ØØØ REM AISLE #1 VEGETABLES
                          :REM*77
1ØØ1 REM{2 SPACEs}**********
     *****,X.XX,X,X       :REM*26
1Ø1Ø DATA LETTUCE (HEAD){4 SPAC
     Es},Ø.59,Ø,1         :REM*49
1Ø2Ø DATA CABBAGE (HEAD){4 SPAC
     Es},Ø.79,Ø,1         :REM*245
1Ø3Ø DATA POTATOES 5 LBS.{3 SPA
     CEs},Ø.79,Ø,1        :REM*2ØØ
1Ø4Ø DATA ONIONS 5 LBS.{5 SPACE
     s},Ø.99,Ø,1          :REM*132
199Ø REM                  :REM*11
2ØØØ REM AISLE # 2 DAIRY PRODUC
     TS                   :REM*17
2ØØ1 REM{2 SPACEs}**********
     *****,X.XX,X,X       :REM*6
2Ø1Ø DATA YOGURT 8 OZ. CUP{2 SP
     ACEs},Ø.59,Ø,2        :REM*13
2Ø2Ø DATA CHEESE 16 SLICES{2 SP
     ACEs},1.59,Ø,2       :REM*199
2Ø3Ø DATA SWISS CHEESE LB.{2 SP
     ACEs},2.49,Ø,2       :REM*195
2Ø4Ø DATA EGGS LARGE DOZEN{2 SP
     ACEs},1.Ø9,Ø,2       :REM*221
2Ø5Ø DATA MILK 2% LOW FAT{3 SPA
     CEs},1.79,Ø,2        :REM*28
299Ø REM                  :REM*247
3ØØØ REM AISLE # 3 MEATS:REM*27
3ØØ1 REM{2 SPACEs}**********
     *****,X.XX,X,X       :REM*242
3Ø1Ø DATA HOT DOGS LB.{6 SPACEs
     },1.89,Ø,3           :REM*87
3Ø2Ø DATA SLICED HAM LB.{4 SPAC
     Es},2.39,Ø,3         :REM*99
3Ø3Ø DATA CHICKEN LB.{7 SPACEs}
     ,1.59,Ø,3            :REM*33
3Ø4Ø DATA PORK CHOPS LB.{4 SPAC
     Es},2.Ø9,Ø,3         :REM*35
399Ø REM                  :REM*227
4ØØØØ DATA END,Ø,Ø,Ø      :REM*98
```

■

GREAT SAVINGS ON LEATHER ATTACHES

Unsnaps for an extra 1¼" depth!

E-X-P-A-N-D-A-B-L-E LEATHER BRIEFCASES

Make a bold, new impression at your next business meeting. Order this **set of TWO** cases for the look and feel of designer attaches...without the high price, due to our special arrangements.

- TWO Factory New, First Quality Cases for ONE Low Liquidation Price.
- Rich Pigskin-Like Interior, Plus Generous Organization Pockets.
- Combination Locks Offer Security.
- Choose Burgundy or Black.

Large Case. It's 13" H x 18¼" W x 4½" D and easily expands an extra 1¼" in depth if you need more room.

Banker's Case. Perfect for meetings where you need only a few documents. 11" H x 16½" W x 2½" D.

Shop and compare! You'll discover this is a great buy for **TWO cases!**

Compare At $229.00

Liquidation Price For Set of TWO $59

Burgundy: Item H-2603-7037-518 S/H: $5.75/set
Black: Item H-2603-7072-648 S/H: $5.75/set

Credit card customers can order by phone, 24 hours a day, 7 days a week.

Toll-Free: 1-800-328-0609

Sales outside the 48 contiguous states are subject to special conditions. Please call or write to inquire.

SEND TO: **Item H-2603**

COMB Direct Marketing Corp.
1405 Xenium Lane N/Minneapolis, MN 55441-4494

Send **Leather Briefcase(s)** at $59 per set, plus $5.75 per set for ship, handling. (Minnesota residents add 6% sales tax. Sorry, no C.O.D. orders.)

Send ___ **Burgundy,** Item H-2603-7037-518
Send ___ **Black,** Item H-2603-7072-648

☐ My check or money order is enclosed. (No delays in processing orders paid by check.)

PLEASE CHECK: ☐ VISA ☐ MasterCard ☐ Discover ☐ American Express

Acct. No. _____ Exp. ___/___

PLEASE PRINT CLEARLY

Name _____

Address _____ Apt. # _____

City _____

State _____ ZIP _____

Phone ( ) _____

Sign Here _____

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

GEOS One Year Later

GEOS was recently named software technical achievement of 1986. Berkeley Softworks president, Brian Dougherty, tells about some of the enhancements and new applications—including a GEOS 128 version.

by DENNIS BRISSON

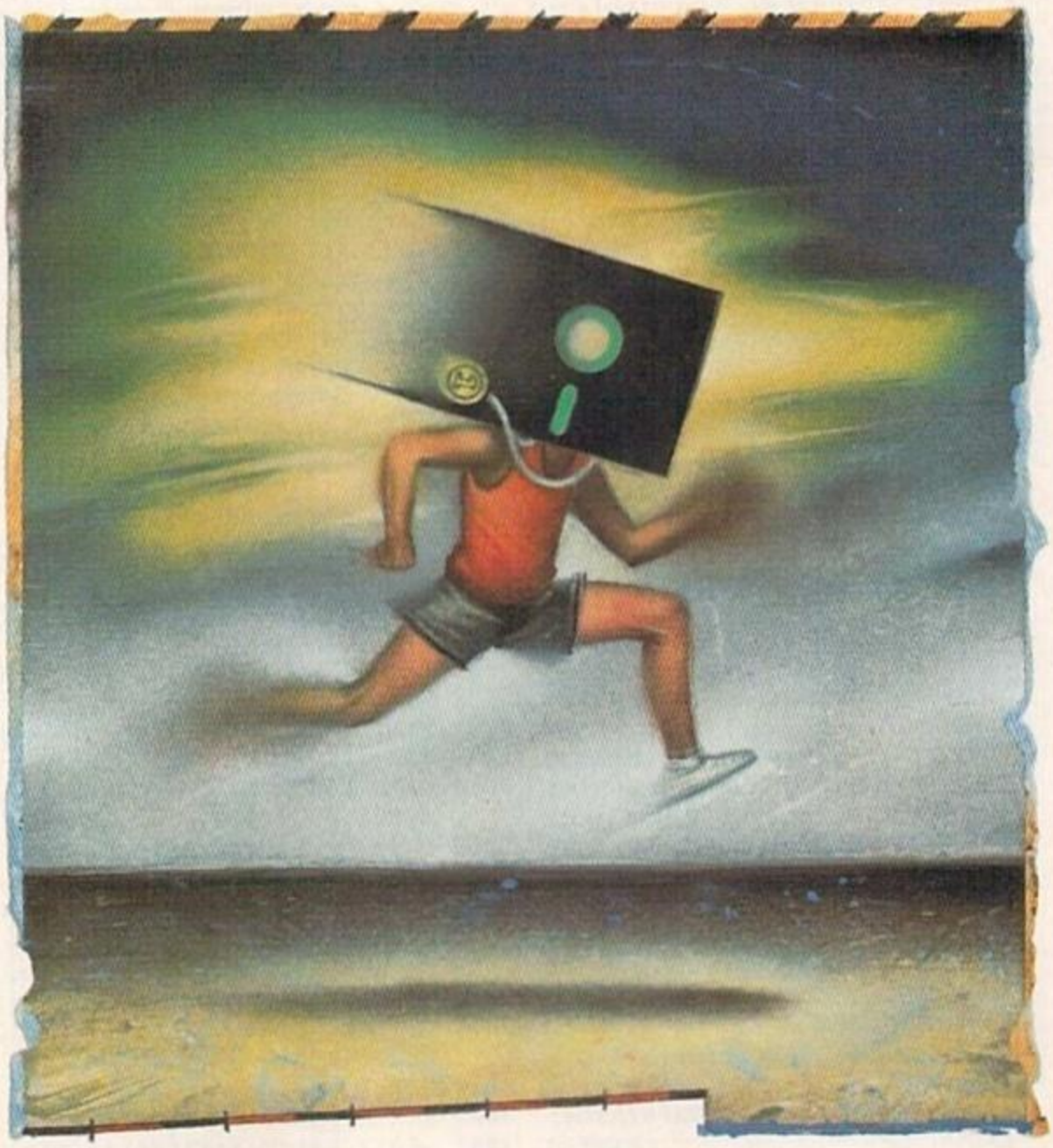
Is your C-64 suffering from a case of the blahs? Do you wish you could pep up your system to give it the productivity prowess of an IBM PC, the graphics capability of an Amiga or the user-friendliness of a Mac?

Well, Berkeley Softworks claims to have the cure. With GEOS, 64 users can take advantage of untapped features and put their machines on a par with much more expensive computers. This is quite a promise for a computer system that a year ago was considered to be nearing the end of the line.

Berkeley Softworks president, Brian Dougherty, was convinced, however, that he could bring new life to this aging machine. "Commodore never appreciated what they had on their hands with the 64. The machine wasn't perceived for the power it possessed."

Dougherty saw the potential of the 64 as greater than many realized. In comparison to the Apple II, for example, "it's got better graphics resolution, comes with more resident memory and has a true interrupt structure so you can do multiprocessing within applications." From a software developer's viewpoint, he also favors the 64 over the IBM PC, "which is a good machine for productivity or business applications, but is fairly slow when it comes to graphics manipulations."

And graphics is what GEOS is all about.



GEOS is a line of productivity software that introduces the 64 user to the use of an operating system of icons, pull-down menus, dialogue boxes and windows—graphics features heretofore found only with higher-priced machines. This family of software—all designed to work together—covers a broad range of applications. GEOS includes a word processor, geoWrite, and a drawing program, geoPaint. Other packages from Berkeley Softworks include a selection of fonts and typestyles, Fontpack; an index program, geoDex; a database, geo-File; a spreadsheet, geoCalc; and a collection of enhancements and applications (Deskpak and Writer's Workshop). More are in the works.

GEOS (pronounced jē ōs) stands for graphic environment operating system.

If you ask 64 users about operating systems, you may receive a blank stare. They're used to having their machines come up functioning in Basic—not a real operating system environment. Dougherty admits that one of the challenges he faces with GEOS is "convincing users that this is a new operating system and not just a group of integrated applications." ►

ILLUSTRATED BY CARY HENRIE

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Modem Commotion!!!

The Best Commodore Direct-Connect Modem for ONLY $99.95.

Now that you're able to do all those stand alone applications with your Commodore, like word processing, spread sheet analysis, etc., you are probably thinking "It would sure be nice if I could expand the information I have access to." Everything from Electronic Mail (E-mail) to stock quotes and huge databases of every imaginable type is now on-line just waiting for you to dial up. All you need is a telephone line and a modem connected to your Commodore which allows you to download this information.

Which modem is best for you?" Lets first say that almost all modems (and services) are set up to communicate in one of two speeds; 300 and 1200 Baud. If you look around you will find that there is a flood of 300 baud modems on the market and sometimes at very low prices. The reason is simple, they are being dumped because most computer users prefer 1200 Baud. (1200 Baud is about 4 times as fast which means you spend less time and money getting the data you want and more time using it.) Virtually everyone who has a 300 would rather have a 1200. You will also notice a few very cheap 1200s on the market at "too good to be true prices". They are. Most are cheaply built foreign copies of American designs. The service and support you receive is minimal-to-nonexistent for these models.

Recently we re-evaluated our modem line and discovered that the best price/performance tradeoff for our Commodore customers would be a straightforward, easy-to-use unit with no complicated switch settings or indicators, but one that just did what our customers wanted without complications. To our surprise (and contrary to popular belief), we found that we could build the unit in the USA with better reliability and performance levels than anywhere else. We found that because of a significant increase in reliability that American components and manufacturing give us, we now have the best fail-safe product possible. An unreliable product is not worth the price, however low. Get a modem that will satisfy your present AND future needs by going directly to the American built **Aprotek 12C!**

What do you get for $99.95? Everything! You don't need to worry about cables, compatibility or anything else! We don't just sell hardware, we sell solutions. The Aprotek 12C plugs directly into your Commodore Vic-20, C-64, C-64C or C-128 User port. The 12C is a full feature, 300 and 1200 Baud modem with Auto Answer, Auto Dial, Touch-Tone or rotary dialing, has status indications on screen to let you know what is happening all the time. The 12C comes complete with "COM TERM 64" a complete communications and terminal program and has a built in speaker so that you can hear it dial and connect. Just plug it into your computer and standard phone jack with the supplied cable. (No additional power supply required.) Also included is a free trial offer subscription to Quantum-Link, the Commodore user database.

STILL NOT SURE? Aproteks' reputation as a first rate peripherals supplier and our 5 year warranty on the 12C plus our 2 week satisfaction or your money back guarantee tells you that we support our products.

Do you have more than one computer or do you plan to get another computer? Call or write for other models.

The bottom line:

Aprotek 12C (Commodore) order #12C.....only $ 99.95
Aprotek 12AM (AMIGA) order #12AM.....only $119.95
Aprotek 12R (RS-232 – all others) order #12R....only $119.95

Shipping – Cont US. = $5., UPS Blue, Can, AK, HI, APO = $10.

UNIVERSAL RS-232 INTERFACE

with Commodore User Port expansion. ONLY $39.95+$3 S&H

Now you can connect and communicate with any of the popular RS-232 peripherals using your Commodore User Port. You can even connect more than one and leave it permanently attached. This superb expander opens a whole new world to your Commodore computer's capabilities. You can now connect to printers, modems and any other RS-232 devices. If you already have a device that connects to the User Port, don't worry because the port is duplicated on the outside edge of the interface. Simply plug it in and turn on the device you want to communicate with. Comes complete with sample driver program listings. Compatible with all Commodore home computers with a user port. 1-year warranty. **Order #5232.**

Aprospand-64™

Gives your Commodore 64 or 128 full expandability!This superbly designed expansion module plugs into the expansion port & gives you 4 switchable (singly or in any combination) expansion connectors —plus fuse protection—plus a reset button! Before you buy an expander, be sure that it has a fuse to protect your computer and that you can activate your cartridges in **any** combination allowed by the cartridges.

The Original

Fully C-128 Compatible

Order # 5064

NOW ONLY $29.95 + $3 S&H

"EXTENDER-64" — 10" Ribbon cable extender for your Commodore cartridge port.
Order #5065 . . . . . $19.95 + $3 S&H

NEW! "USER EXTENDER" — 10" Ribbon cable extender for your Commodore USER port.
Order #5250 . . . . . $21.95 + $3 S&H

Commodore Interfaces and Cables

Cardprint G-WIZ Printer Interface #1108	$46.95
Commodore Serial Extension Cables	$Call
Amiga Printer Cable (6 ft) #3040-6MF	$12.95
Amiga Printer Cable (10 ft) #3040-10MF	$16.95
Commodore 6 Pin Serial Cable (5 ft) #3006-5MM	$ 7.95
Commodore 6 Pin Serial Cable (8 ft) #3006-8MM	$ 9.95

Shipping per above items: $3. Cont. US $6. CAN,PR,HI,AK,APO,UPS Blue

PRINTERS — SEIKOSHA — Price & Shipping

SP-180VC (C-64) Order #2050	$154.95 + $10.00
SP-1000VC (C-64) Order#2200	$163.95 + $10.00
SP-1000AS Serial Order #2500	$184.95 + $10.00
SP-1200AI (EPSON/IBM) Order #2600	$199.95 + $10.00
MP-1300AI 300 CPS Order #2700	$389.95 + $12.00
MP-1300 Color Kit Order #2705	$ 99.95 + $ 5.00

TTXpress Portable Printer #2040 .....$99.95 + $7.00

2.2 lbs. • Size 11" × 4½" × 1⅛" • Internal batteries • 8½" wide thermal paper • 40, 80, or 160 characters/ line • 40 characters/second • 20' roll paper • Centronics Parallel Interface • 7 × 9 print font w/decenders • internal buffer • Emphasized and Underline modes

ORDER INFORMATION California residents add 6% tax. All prices are cash prices—VISA and MC add 3% to total. We ship the next business day on money orders, cashier's checks, and charge cards. A 14-day clearing period is required for checks. Prices and availability subject to change — CALL. **Available at Selected Dealers.** Dealer inquiries invited.

For information call **805/987-2454 (8 – 5 PST)**

TO ORDER CALL TOLL FREE

1 (800) 962-5800 - USA
1 (800) 962-3800 - Calif (7-7 PST)

Or send order to:

APROTEK **Dept. RN** 1071-A Avenida Acaso Camarillo, CA 93010

Circle 79 on Reader Service card.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

GEOS

The impetus for developing GEOS, which was introduced in March 1986, arose from the need to develop a productivity application for a system that was primarily viewed for entertainment. "We felt that the whole productivity area for Commodore had been somewhat neglected," observes Dougherty. Since GEOS was introduced, the user base has expanded to approximately 400,000, making it one of the top-selling products for the 64 market.

"QuantumLink has allowed us to keep our prices low and provide very good customer service for users."

A Rocky Start

A year ago, you might not have predicted the product would do this well. It met with mixed reactions when first introduced.

GEOS was criticized for being incompatible with a lot of the existing Commodore hardware, particularly printers. And geoWrite, the package's word processor, was slow and awkward to use.

Dougherty states that while most users realized and appreciated the capability of GEOS, a few were guilty of "looking at the hole instead of the doughnut."

"People looked at the initial geoWrite program and said, 'Gee, it doesn't have superscripts or subscripts or automatic page numbering.' And they missed the fact that for the first time on a 64 they could create high-resolution documents incorporating multiple proportionally spaced fonts. They could not only have italicized bold, but could use any of a wide range of font styles to give them a very high range of flexibility in the way the documents can be prepared."

Dougherty also emphasizes the difference between a proportionally spaced, graphically oriented font word processor (geoWrite) and a simple character word processor. "Granted, the 2.0 version of geoWrite wasn't as fast as character-based word processing systems, but it allowed them to generate much better-looking documents. The unique thing about our word processor is the quality of the presentation that you can create. With laser-printing capability, GEOS offers basically the kind of printing and publishing capability that never existed on personal computers before the Mac came along."

Like any top-quality company, Berkeley Softworks continually works to make its products compatible with existing hardware, to enhance its existing software and create new and exciting applications.

Since introducing GEOS last March, Berkeley Softworks has updated GEOS three times and generated a complete line of productivity applications. For example, version 1.2 GEOS featured 11 printer drivers, which supported about 25 printers. The current version of GEOS has 40 printer drivers, which support over 60 printers. "So we think we have addressed just about every printer," laughs Dougherty.

Berkeley Softworks' success this year can also be attributed to some very propitious alliances that the company has established.

Commodore itself is actively promoting GEOS by bundling it with new 64 computer packages. If you buy Commodore peripherals (1351 mouse and 1764 RAM expander), you'll also receive the latest GEOS updates. This relationship is responsible for the wide distribution of the product (in addition to Berkeley Softworks' direct sales efforts).

The QuantumLink Connection

An even more favorable arrangement involves Berkeley and QuantumLink, the Commodore-specific, on-line electronic network.

Dougherty relates an incident that occurred one Saturday while he was working in his Berkeley Softworks office. He answered a call from a woman in Vermont who had just purchased GEOS and needed a program to enable her to print out on her Okidata 120 printer. Dougherty found out that she belonged to QuantumLink and informed her that she could download the program she needed from there.

"She called me back a couple of hours later to say that she had downloaded the 120 printer driver and everything was now working great."

This points out a convenient solution to the need for Berkeley to inform its users about changes, improvements and the latest developments for its product. If you subscribe to QuantumLink, you can download for free the latest GEOS upgrades.

Dougherty admits that this on-line service has been an effective and cost-savings tool in helping Berkeley Softworks to reach its customers and to support its product. QuantumLink has "allowed us to keep our prices low and provide very good customer service for users." He notes that without QuantumLink, the cost of customer service would have to be reflected in the price of the product. Dougherty also recognizes a "certain inequity" because "people who don't need help end up subsidizing people who do need a lot of support."

Besides offering upgrades and GEOS software to download, Berkeley also offers a special programming and technical information area on QuantumLink for developers and users. In addition, GEOS owners can download "BandAid programs," which correct any obscure bugs that Berkeley Softworks may have run across and also produce laser-quality printouts of their GEOS files via QuantumLink.

"QuantumLink's a terrific vehicle for presenting a very few small problems that account for the majority of customer service questions. Users can get on and look at a bulletin board that will have those questions answered for them, as well as being able to get lots of help for other GEOS users."

GEOS Support

Third-party hardware and software developers have been slow to embrace GEOS. Dougherty explains: "Before companies could really get into developing for the GEOS operating system, we had to get the GEOS programmers manual out, and that took us longer than expected."

Their manual is now in widespread distribution, and the company is also running the technical information board on QuantumLink and answering questions from software developers about programming in the GEOS environment. Berkeley Softworks has received inquiries from several software developers, most notably, Timeworks, which, according to Dougherty, is working on GEOS applications. (Their Partner 64 program is GEOS-compatible.)

Despite the slow acceptance from the development community, Dougherty recently received a big boost at the annual Software Publisher's Association awards ceremony. GEOS was voted the software technical achievement of the year, an honor that particularly pleased Dougherty because GEOS, as judged by other developers, bested seemingly more powerful products for the IBM, Mac and Amiga.

Dougherty, himself a GEOS user ("I do all my business correspondence with GEOS on a C-64 and a Laser Writer."), is somewhat of a 64 crusader. He states,

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

"I really believe the 64 is the best personal computer value on the market." His staff is currently working on a product for the school environment, which "will help keep the Commodore market alive," he says.

Berkeley Softworks is continually developing new applications and enhancements to existing ones and is attempting to bring more users into the GEOS fold. "We think the new applications we've just released (geoFile and geoCalc) will really help owners to see GEOS as a lot more than one integrated applications package."

New Ventures

Buoyed by the success of GEOS for the 64, Berkeley Softworks will be releasing a 128 version sometime this summer. (GEOS 128 was demonstrated at the Las Vegas CES last January.) The most notable improvement is that GEOS 128 will take advantage of the 80-column capability, "plus a couple of other technical improvements that take advantage of the extra memory and the 2 MHz clock speed to improve overall system performance." Current and planned 64 GEOS applications will also be implemented in a full 80-column 128 version.

At the same time, the Berkeley Softworks staff is currently working on releasing more 64 applications, such as geoSpell; geoFont, a font editor (due out this month); geoProgrammer, which Dougherty describes as "a really elegant programming environment for people to develop GEOS applications"; geoPublish, which promises full-blown desktop publishing capabilities for GEOS users; and geoBasic, a new Basic that will fully exploit the GEOS operating system.

The features of GEOS are best appreciated when used in conjunction with two recent hardware developments from Commodore—the 1351 mouse and the 1764 RAM expander. An input driver for the 1351 mouse is available, and a new program called Configure (which comes with the 1764) allows you to create a RAM disk using the 1764. Configure also supports the 1571 and the new 1581 3½-inch disk drive.

Berkeley Softworks plans to release its own mouse device, which Dougherty describes as a "true proportional mouse with a battery-backed-up clock." With this device, he explains, the time and date will automatically be set every time a user powers up his system.

Dougherty is pleased with the level of support and popularity for GEOS among the user community and is optimistic about the future.

"We had high expectations for GEOS," he says, "and many of our hopes have been realized, but we're by no means complacent. We feel that there are still a lot of people out there who may not be using their Commodores anymore and don't have GEOS. We're trying to reach these people to get them to see that you don't need to go out and spend $2000 for the latest computer to get the latest in computer technology." ■

Dennis Brisson has been Editor-in-Chief of RUN *magazine ever since it started to take shape in the summer of 1983. He is now a confirmed GEOS user.*

THE WORLD OF COMMODORE

The 1986 Canadian World Of Commodore show was the largest and best attended show in Commodore International's history. With 350 booths and attendance of over 38,000 users it was larger than any other Commodore show in the World — and this year's show will be even larger.

World of Commodore is designed specifically to appeal to the interests and needs of present and potential Commodore owners — from hardware to software, Business to Personal to Educational.

Exhibitors: Write or phone today to find out how you can take part in the World's largest Commodore Show.

For information contact:
The Hunter Group Inc.
(416) 595-5906

INTERNATIONAL CENTRE
DECEMBER 3-7 '87
TORONTO
CANADA

Circle 54 on Reader Service card.

COMPUTEREYES™

Capture Video Images: only $129.95

Now you can easily and inexpensively acquire images from any standard video source – videotape, camera, disk – for display on your Commodore 64 or 128. Capture time is less than six seconds.

ComputerEyes has everything you need: Interface hardware, complete easy-to-use software support on disk, owner's manual, and optional enhancement software. And it's compatible with virtually all popular graphics programs. Think of the possibilities!

ComputerEyes is backed by a one year warranty and the success of over 10,000 systems sold. Satisfaction guaranteed or return it within ten days for full refund. Also available: Demo Disk, $3; ComputerEyes with quality b/w video camera, $399.95 complete. See your dealer or order direct. For more information call 617-329-5400.

To order call 800-346-0090
or mail your order to: Digital Vision, Inc.
66 Eastern Avenue, Dedham, MA 02026
VISA, M/C, or COD accepted.
S&H: $4 for ComputerEyes, $9 for Camera System. Mass. residents add 5% sales tax.

DIGITAL VISION

Circle 128 on Reader Service card.

http://www.oldgamesitalia.net/

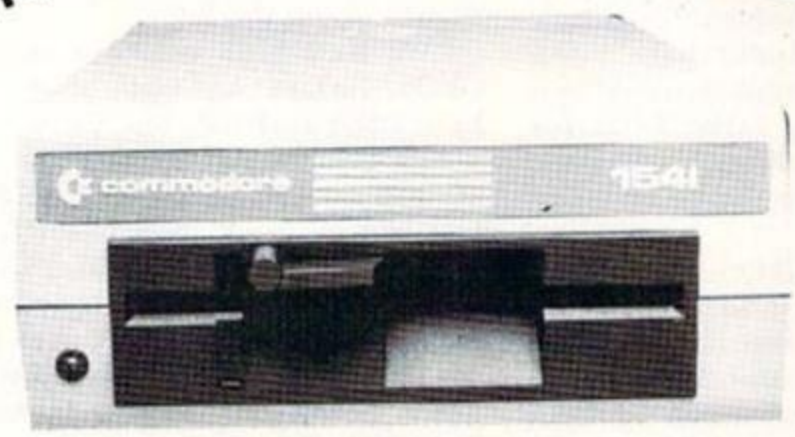
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

PRO-TECH-TRONICS

1541 DISK DRIVE

NEW UNITS



$98

1541 COMMODORE DISK DRIVE

FREE HOME TRIAL

*with purchase of our specially priced software

EMPLOYEE OF THE MONTH

PAUL TARARA

TECHNICAL SUPPORT MANAGER

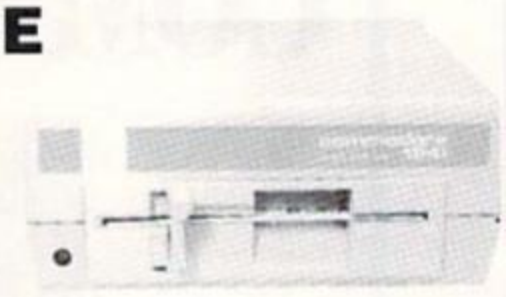
QUESTION: What is the major strong point of the Commodore 64?

ANSWER: *It's the best beginner computer on the market today, no other computer has more software available for people just starting out.*

DISK DRIVE

1541C COMMODORE

$159



MODEMS

300 BAUD

$28

1670 COMMODORE

$119

FREE TRIAL PERIOD

1200/300 BAUD

CALL TODAY
OPEN 7 DAYS A WEEK & EVENINGS

1-800-345-5080

http://www.oldgamesitalia.net/

Circle 223 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

COMMODORE

COMPUTER

"NEW"
GEOS INCLUDED

64C

$139

with purchase of disk drive package

COMPUTER

C-128

$219

with purchase of computer stand

IBM COMPATIBLE

FREE SOFTWARE "SIDEKICK" INCLUDED

PC10-2

$749

Less — $150
(with trade in)

$599

FREE SHIPPING!

- 640 K Ram
- MS-DOS® 3.2
- Two - 360K DSDD
- PC-XT™ Compatible BIOS*
- Centronics® Parallel Port
- RS-232 Serial Port
- 5 Full-Size Expansion Slots
- Compatible to Support 40 MB Hard Drive
- PHONIEX-BIOS
- ATI Graphics Solutions Adapter* —Built-in monochrome and color display card compatible with IBM® CGA® and MDA®, Hercules® and Plantronics® video modes.

*MONITOR ADDITIONAL

Trade in your working C-64 and 1541 Disk Drive And Receive a **$150 REBATE!**

CALL TODAY AND ASK FOR **"THE CLONE KILLER"**

C-64 COMPUTER

$98

FREE HOME TRIAL

with purchase of our specially priced software

256K RAM EXPANSION

FOR YOUR COMMODORE

C-64 C-128 AMIGA

$149 ea.

1764 1750 Expansion Module

FREE TRIAL PERIOD

PRINTER

SEIKOSHA
Near Letter Quality

$149*

(Includes Interface)

FREE TRIAL PERIOD

- 100 CPS Draft
- 20 CPS Near Letter Quality Mode

*with purchase of printer kit

COMMODORE READY!

PRINTER

$128

FREE TRIAL PERIOD

For Your Commodore

QUICK-DELIVERY

MasterCard VISA C.O.D. SCHOOL P.O.'s ACCEPTED

PRO-TECH-TRONICS
6860 Shingle Creek Parkway #221
Minneapolis, MN 55430
Customer Assistance (612) 560-6603
Technical Services (612) 561-3934

Circle 223 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

PRO-TECH-TRONICS

SOFTWARE

LIMITED SUPPLY (NO DEALERS)

ALL SIX PIECES OF SOFTWARE

1. English II
2. Math II
3. Science II
4. Triad
5. Pilot
6. Fish-Metic

$39

FREE SHIPPING!

SIMULATORS

$28 ea.

GUNSHIP — F-15 JET

PRO-SPORTS

GOLF — WRESTLING

$28 ea.

LEADERBOARD — TAG-TEAM

WORD PROCESSING

$38 ea.

WORDWRITER WITH SPELL CHECK — TERM PAPER WRITER

ACCESSORIES

POWER SUPPLIES

$29 C-64

$69 C-128

SURGE PROTECTOR

$19

Protect your computer from lightning

DATA SET

$28

For 64, PLUS 4

$58

TILT AND SWIVEL POWER CENTER

MOUSE **$34.95**

- Pull down menu
- Load directory
- Scratch
- Browse File
- Adjustable File

PEN LIGHT

$89

"Create Flexdraw Computer Graphs"

FAST LOAD CARTRIDGE

Load your programs 5 time faster!

$29

VOICE MASTER

64/128

$79

Command you computer by voice

JOY STICK

$9.95

"with suction cups"
C-64, Plus 4, 128

MONITOR GLARE GUARD

$19

RS-232

$48

FLOPPY DISK FILER

$9.95

FREE TRIAL PERIOD FOR ALL ACCESSORIES

CALL TODAY
OPEN 7 DAYS A WEEK & EVENINGS

1-800-345-5080

http://www.oldgamesitalia.net/

Circle 201 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

COMMODORE

MONITOR

1902

COMMODORE **RGB**

$239

For Your
Commodore 128

with purchase of monitor glare guard

FREE TRIAL PERIOD

MONITOR

FULL COLOR **COMPOSITE**

$178

FREE TRIAL PERIOD

MONITOR

MONOCROME

$89

FREE TRIAL PERIOD

DISKETTES

DOUBLE DENSITY
DOUBLE SIDED

28¢ ea.

IN 100 LOTS

with purchase of
floppy disk filer

LIFETIME GUARANTEE!

PRINTING

CALENDAR AND STATIONERY

$9

PRINT SHOP

$29

ELECTRONICS

MAXON
RADAR
DETECTOR

$78

Superhetrodyne

FREE TRIAL PERIOD

CABLE TV?
NO PAY TV?
CONVERTERS
DECODER

Jerrold
Oak
Hamlin
Scientific Atlanta

QUICK-DELIVERY

MasterCard VISA C.O.D. SCHOOL P.O.'s ACCEPTED

PRO-TECH-TRONICS
6860 Shingle Creek Parkway #221
Minneapolis, MN 55430
Customer Assistance (612) 560-6603
Technical Services (612) 561-3934

http://www.oldgamesitalia.net/

Circle 201 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Linker 128

This valuable substitute for the missing C-128 Append command lets you combine a number of Basic program files into one.

by DALE S. BROWN

In the 1986 *RUN* Special Issue, Morton Kevelson's article, "C-128 Programmer's Aid," contained a sidebar entitled "Missing Link Uncovered!" (p. 66) that dealt with the C-128's lack of a Merge or Append command. The article was helpful, but the Appender program in it had some problems.

Prior to an "appending load," the program changed the start-of-Basic pointers at locations 45 and 46 to locations 174 and 175, because, as the article stated, "the end of the Basic program is stored in addresses 174 and 175." However, addresses 174 and 175 actually store the end address for the last load, save or verify operation. As a result, if you load and edit the main program and then try to append a program segment or subroutine to it, the address that locations 174 and 175 point to will be obsolete.

Fortunately, Basic 7.0 gave me the tools to build an append program that really works. Linker, as I call it, first checks to see if you're in 40- or 80-Column mode and formats the screen accordingly. Then it prompts you for the filename of your main program, the number and filenames of the program segments or subroutines you want to link to it and the filename you want the final program to have.

There are three rules to follow in using Linker:

1. The main program and all the files to be linked to it must be on the same disk.

2. Subroutines or program segments to be linked to the main program must have line numbers greater than the main program.

3. The filenames of the subroutines or program segments must be entered at the prompts or assigned to the array variables.

Linker can handle no more than nine linked files each time it's used. This ensures that variables won't quickly exceed the memory limitations of bank 1, and it permits easy checking for erroneous input data in line 240. If you need more variable capacity, you can increase the DIM of B$(X) in line 65 and remove line 240.

ILLUSTRATED BY ROB COLVIN

LISTINGS 1–5

Listings 1–5 contain Linker and some short programs for demonstration ►

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

SOFTWARE DISCOUNTERS OF AMERICA

For Orders Only — 1-800-225-7638
PA Orders — 1-800-223-7784
Customer Service 412-361-5291

- Free shipping on orders over $100 in continental USA
- No Surcharge for VISA/MasterCard
- Your card is not charged until we ship

ABACUS SOFTWARE
Assembler Monitor ... $25
Basic ... $25
Basic 128 ... $39
Cad Pak ... $25
Cad Pak 128 ... $39
Chart Pak 128 ... $25
Cobol ... $25
Cobol 128 ... $39
Forth ... $25
Power Plan ... $25
PPM ... $25
PPM 128 ... $39
Speed Term 64 or 128 ... $25
Super C ... $39
Super C 128 ... $39
Super Pascal ... $39
Super Pascal 128 ... $39

ACCESS
Famous Course Disk for World Class L.B. ... $14
Mach 128 (R) ... $33
Tenth Frame ... $25
Triple Pack: BH1, BH2, Raid Over Moscow ... $14
World Class Leader Board ... $25

ACCOLADE
Ace of Aces ... $19
Comics ... $19
Fight Night ... $19
Hardball ... $19
Killed Until Dead ... $19

ACTION SOFT
Thunder Chopper ... $19
Up Periscope! ... $19

ACTIVISION
Aliens ... $23
Cross Country Road Race ... $9.88
Gamemaker ... $25
Gamemaker Library Disks
Sports ... $14
Science Fiction ... $14
Hacker ... $9.88
Hacker 2 ... $23
Little Computer People $9.88
Music Studio ... $23
Portal ... $25
Shanghai ... $19
Tass Times ... $19
Transformers ... $19

ARTWORX
Beach Blanket Volleyball ... $9.88
Bridge 4.0 ... $16
Equestrian Show Jumper ... $9.88
Highland Games ... $9.88
International Hockey ... $16
Linkword French ... $16
Linkword German ... $16
Linkword Spanish ... $16
Police Cadet ... $9.88
Strip Poker ... $21
Data Disk #1 Female ... $14
Data Disk #2 Male ... $14
Data Disk #3 Female ... $14
Thai Boxing ... $9.88

AVALON HILL
Super Sunday ... $21
SBS 1985 Team Disk ... $14
SBS Champs Disk ... $14

AVANTAGE
Desert Fox ... $9.88
Deceptor ... $9.88
Power ... $9.88
Spy vs. Spy 1 & 2 ... $9.88

BAUDVILLE
Blazing Paddles ... $23
Video Vegas ... $19

BERKELEY SOFTWORKS
Geos 128 ... $44
Geos 64 ... $39
*Geo-Calc ... $33
*Geos Desk Pak 1 ... $23
*Geo-Dex ... $25
*Geo-File ... $33
*Geos Font Pak ... $19
*Writer's Workshop ... $33
*Geos 64 add-on programs only!

BETTER WORKING
Business Form Shop ... $25
Turbo Load & Save (R) ... $19

BRODERBUND
Bank St. Writer ... $33
Carmen Sandiego: USA ... $25
World ... $23
Karateka ... $19
Loderunner ... $23
Print Shop ... $26
P.S. Companion ... $23
P.S. Graphics Library #1, #2, or #3 ... $16 Ea.
P.S. Graphics Library Holiday Edition ... $16
Toy Shop ... $26

CMS
CMS Accounting ... $119
CMS Acct. 128 ... $119
CMS Inventory 128 ... $49

DATA EAST
Breakthru ... $23
Commando ... $23
Express Raider ... $23
Ikari Warriors ... $23
Karate Champ ... $14
Kung Fu Master ... $14
Tag Team Wrestling ... $23

DAVIDSON
Algeblaster ... $33
Math Blaster ... $33
Spell It ... $33
Word Attack ... $33

ELECTRIC DREAMS
Rocky Horror Show ... $14
Spindizzy ... $9.88
Titanic Recovery Mission $14

ELECTRONIC ARTS
Software Classic Series:
Archon ... $9.88
Archon 2: Adept ... $9.88
Financial Cookbook ... $9.88
Heart of Africa ... $9.88
Mail Order Monsters $9.88
Mind Mirror ... $9.88
Movie Maker ... $9.88
M.U.L.E. ... $9.88
Music Const. Set ... $9.88
One-on-One ... $9.88
Pinball Const. Set ... $9.88
Racing Dest. Set ... $9.88
Seven Cities Gold ... $9.88
Skyfox ... $9.88
Super Boulder Dash ... $9.88
Touchdown Football ... $9.88
Ultimate Wizard ... $9.88

ELECTRONIC ARTS
America's Cup Sailing ... $23
Arctic Fox ... $23
Bard's Tale 1 ... $26
Bard's Tale 2: The Destiny Knight ... $26
Chessmaster 2000 ... $26
Lords of Conquest ... $23
Murder Party ... $23
Marble Madness ... $23
Pegasus ... $23
Road to Moscow ... $26
Russia — The Great War ... $26
Scrabble ... $23
Star Fleet 1 ... $26
World Tour Golf ... $25

EPYX
Ballblazer ... $9.88
Champ. Wrestling ... $23
Create A Calendar ... $19
Destroyer ... $23
Fast Load (R) ... $23
Gateway to Apshai ... $6.88
Impossible Mission ... $6.88
Jet Combat Simulator ... $14
Koronis Rift ... $9.88
Movie Monster ... $14
Multiplan 128 ... $25
Pitstop 2 ... $9.88
P.S. Graphics Scrapbook #1: Sports ... $16
#2: Off the Wall ... $16
#3: School ... $16
Rescue on Fractalus ... $9.88
Street Sports: Baseball ... $23
Basketball ... Call
Sub Battle Simulator ... $25
Summer Games ... $14
Summer Games 2 ... $23
Super Cycle ... $14
Temple Apshai Trilogy $14
The Eidolon ... $9.88
World Games ... $23
World's Greatest Baseball ... $14

FIREBIRD
Elite ... $21
Elite Hint Book ... $6
Starglider ... $25
The Pawn ... $25
The Sentry ... $25
Tracker ... $25

GAMESTAR
Champ. Baseball ... $19
Champ. Basketball ... $23
On-Court Tennis ... $19
Star Rank Boxing ... $19
GFL Ch. Football ... $23

HI-TECH EXPRESSIONS
Award Ware ... $9.88
Card Ware ... $6.88
Heart Ware ... $6.88
Love Note Maker ... $9.88
Party Ware ... $9.88

INFOCOM
Bureaucracy 128 ... $23
Hitchhiker's Guide ... $19
Hollywood Hijinx ... $23
Leather Goddesses ... $23
Moonmist ... $23
Trinity 128 ... $23
Zork 1 ... $23
Zork Trilogy ... $39

KONAMI
Jailbreak ... $19
Yie Ar Kung Fu/ Rush 'N Attack ... $19
Yie Ar Kung Fu 2 ... $19

MASTERTRONIC
Action Biker ... $6.88
Bounder ... $6.88
Captain Zap ... $6.88
Electra Glide ... $6.88
Infinity Machine (R) ... $9.88
5-A-Side Soccer ... $6.88
Knight Games ... $6.88
Last V-8 ... $6.88
Master of Magic ... $6.88
Ninja ... $6.88
Pro Golf ... $6.88
Shogun ... $6.88
Speed King ... $6.88
The Slugger ... $6.88
Vegas Poker & Jackpot ... $6.88

MICROLEAGUE
Baseball ... $25
Box Score Stats ... $16
General Manager ... $19
1986 Team Data Disk ... $14

MICROPROSE
Acrojet ... $16
Conflict in Viet Nam ... $25
F-15 Strike Eagle ... $23
Gunship ... $23
Kennedy Approach ... $16
Pirates ... $25
Silent Service ... $23
Top Gunner ... $16

MINDSCAPE
Bop & Wrestle ... $19
Defender of the Crown $25
Fairlight ... $19
Fist ... $19
Indoor Sports ... $19
Infiltrator ... $19
Parallax ... $19
Perfect Score SAT ... $44
Super Star Ice Hockey ... $23
The American Challenge Sailing Simulation ... $19
Trail Blazer ... $19
Uchi Mata ... $19
Uridium ... $19

MISC
Bob's Pro Term 128 ... $47
Celebrity Cookbook ... $19
CSM 1541 Align Kit ... $29
C.P. Copy 2 ... $23
Doodle ... $25
Final Cartridge ... $39
Font Master 2 ... $33
Font Master 128 ... $39
Gato ... $16
GEOS — Inside & Out (Book) ... $15
GEOS — Tricks & Tips (Book) ... $15
Multiplan 64 ... $14
Picasso's Revenge Light Pen w/Software ... $39
Snapshot 64 (R) ... $39
Superbase 64 ... $44
Superbase 128 ... $59
Superscript 64 ... $29
Superscript 128 ... $44
X-15 Alpha Mission ... $19

ORIGIN
Autoduel ... $32
Moebius ... $26
Ogre ... $26
Ultima 3 ... $26
Ultima 4 ... $39

PERSONAL CHOICE
I am the C128 ... $23
I am the C64 ... $19
Term Paper Writer 128 $25

PROFESSIONAL
Fleet Filer 64 & 128 ... $25
Fleet System 2 ... $39
Fleet System 3 128 ... $43
Fleet System 4 128 ... $49

RELEVANT
Billboard Maker ... $25
Icon Factory ... $25
Photo Finish ... $19

SHARE DATA
Family Feud ... $7.88
Jeopardy ... $7.88
Wheel of Fortune ... $7.88

SIMON & SCHUSTER
Chem. Lab ... $25
Great Int'l. Paper Airplane Const. ... 9.88
Star Trek: Promethean Prophecy ... $19
Typing Tutor 3 ... $25

SOFTSYNC
Desk Mgr. 64 & 128 ... $25
Model Diet ... $19
Personal Accountant ... $23
Trio 128 ... $43

SPINNAKER
Facemaker (R) ... $6.88
Fraction Fever (R) ... $6.88
Letter Scrambler (R) ... $6.88
Ranch (R) ... $6.88
Story Machine (R) ... $6.88

SPRINGBOARD
Certificate Maker ... $32
C.M. Library Vol. 1 ... $23
Newsroom ... $32
N.R. Clip Art Vol. 1 ... $19
N.R. Clip Art Vol. 2 ... $25
N.R. Clip Art Vol. 3 ... $19
Print Shop Graphics Expander ... $23

SSI
Battle Cruiser ... $37
Battle of Antietam ... $33
B-24 ... $23
Gettysburg ... $37
Phantasie ... $25
Phantasie 2 ... $25
Phantasie 3 ... $25
Realms of Darkness ... $25
Rings of Zilfin ... $25
Roadwar 2000 ... $25
Shard of Spring ... $25
War Game Construction Set ... $19
War in S. Pacific ... $37
Warship ... $37
Wizard's Crown ... $25

SUBLOGIC
Baseball ... $32
Flight Simulator 2 ... $32
F.S. Scenery Disks ... Call
Football ... $26
Jet ... $26

TELARIUM
Amazon ... $9.88
Dragon World ... $9.88
Fahrenheit 451 ... $9.88
Nine Princes ... $9.88
Perry Mason ... $9.88
Rendezvous w/Rama ... $9.88

THUNDER MOUNTAIN
Cyrus Chess ... $6.88
Maxi Golf ... $6.88
Rambo ... $6.88
The Eliminator ... $6.88
Top Gun ... $6.88

TIMEWORKS
Accts. Payable ... $33
Accts. Receivable ... $33
Data Manager 2 ... $25
Data Manager 128 ... $43
General Ledger ... $33
Inventory Mgmt ... $33
Partner 64 (R) ... $39
Partner 128 (R) ... $43
Swiftcalc/Sideways(D) ... $25
Swiftcalc/Sideways 128 $43
Sylvia Porter's Personal Fin. Planner 64 ... $33
Sylvia Porter's Personal Fin. Planner 128 ... $43
Word Writer 3 ... $33
Word Writer 128 ... $43

UNICORN
Animal Kingdom ... $19
Decimal Dungeon ... $19
Fraction Action ... $19
Percentage Panic ... $19
Race Car Rithmetic ... $19
Ten Little Robots ... $19

UNISON WORLD
Art Gallery 1 or 2 ... $16 ea.
Print Master Plus ... $23

VALUE TIME
Art Library 1 or 2 ... $6.88
Calendars & Stationery ... $6.88
Greeting Cards ... $6.88
Signs & Banners ... $6.88

WEEKLY READER
Stickybear Series:
ABC's ... $16
Math ... $16
Numbers ... $16
Opposites ... $16
Reading ... $16
Shapes ... $16
Spellgrabber ... $16
Typing ... $16

WINDHAM CLASSICS
Alice in Wonderland ... $6.88
Below the Root ... $6.88
Swiss Family Robinson ... $6.88
Treasure Island ... $6.88
Wizard of Oz ... $6.88

ACCESSORIES
Anchor 6480 w/software 1200 Baud Modem ... $119
Bonus SS, DD ... $4.99 Bx
Bonus DS, DD ... $6.99 Bx
Compuserve Starter Kit (a $25 usage Credit) ... $23
Disk Case (Holds 75) ... $9
Disk Drive Cleaner ... $9
Disk Notcher ... $6.88
Epyx 500XJ Joystick ... $14
Hot Shot Printer Int. ... Call
Messenger Modem ... $33
Wico Bat Handle ... $17
Wico Boss ... $12
XETEC Super Graphix ... $59
XETEC Super Graphix Jr. $39

*all programs on disk unless otherwise noted!

P.O. BOX 111327 — DEPT. RN — BLAWNOX, PA 15238

*Please Read The Following Ordering Terms & Conditions Carefully Before Placing Your Order: Orders with cashiers check or money order shipped immediately on in stock items. Personal & Company checks, allow 3 weeks clearance. No C.O.D.'s! Shipping: Continental U.S.A. — Orders under $100 add $3; free shipping on orders over $100. AK, HI, FPO, APO — add $5 on all orders. Canada & Puerto Rico — add $10 on all orders. Sorry, no other International orders accepted! PA residents add 6% sales tax on the total amount of order including shipping charges! REASONS FOR CALLING CUSTOMER SERVICE — 412-361-5291 (1) Status of order or back order (2) If any merchandise purchased within 60 days from S.D. of A. is defective, please call for a return authorization number. Defective merchandise will be replaced with the same merchandise only. Other returns subject to a 15% restocking charge. After 60 days please refer to the manufacturers warranty included with the merchandise & return directly to the manufacturer. Customer service will not accept collect calls or calls on S.D. OF A.'s 800# order lines! Have you seen our on line catalog of 1000 software titles for Commodore, Atari, Apple, IBM and Amiga? It's on Compuserve's Electronic Mall — just type GO SDA and shopping for software will never be the same again! HOURS: Mon.-Fri. 9AM-5:30 PM, Sat. 10AM-4PM Eastern Time. Because this ad had to be written 2-3 mos. before it was published, prices & availability are subject to change! New titles are arriving daily! Please call for more information!

Circle 254 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

purposes. Here are brief descriptions of them:

Listing 1, Linker, is the "work" program that links files together. Be sure to save it with the filename LINKER, because the demonstration programs will be looking for it with that name.

Listing 2, LinkLDR, is a short, main program to use for demonstration purposes. It prompts you to insert a disk containing Linker, then loads and runs it.

Listing 3, PressKey.400, is a subroutine that provides a colorful "press any key to continue" prompt once you've performed some other action the program has requested, such as inserting the proper disk as prompted by the subroutine in Listing 4.

Listing 4, InsertDisk.401, prompts you to insert a disk, previously defined in KD$, into the drive.

Listing 5, SoundPrompt.402, is a subroutine that plays a note or notes (depending upon the value in KS) to alert the user that something needs doing. Lines 40210–40225 set up the notes the first time the routine is called. Line 40245 contains the tune—in this case the first few notes of Yankee Doodle. If you change line 40425, be sure to change the 7 in line 40240 to match your final number of notes.

Using Linker

Type in and save Listings 1–5 under the filenames indicated in their initial lines. Then load and run the actual

". . . you must declare any variables . . . at the beginning of the . . . listing, as you would in Pascal."

Linker program itself (Listing 1).

At the first prompt, input LINKLDR, and at the second prompt, input 3, the number of subroutines to link. Then input the filenames of the subroutines in this order:

PRESSKEY.400
INSERTDISK.401
SOUNDPROMPT.402

At the final prompt, input a filename for the combined program. It needs to be less than 16 letters long, and it can't already be used on the disk.

You'll notice that the filenames for the three subroutines contain the first three digits of their starting line numbers. These digits are referenced by a Gosub during execution.

Mini-Linker

Listing 6, Mini-Linker, is for advanced programmers who may want to keep Linker in memory as a wedge. It does no disk-error checking, and it's meant to be loaded prior to starting your program.

To set up Mini-Linker, you must append your main program to it, starting at Mini-Linker's line 100. Also, you must declare any variables in your main program at the beginning of the main program's listing, as you would in Pascal. Finally, you must declare, before line 100 of Mini-Linker, the subroutines that you want to link to your main program.

When you use a Gosub to access a new subroutine not previously linked to your program, declare the subroutine filename as one of the B$(X) array variables. Then, when you're ready to link files, go back and rearrange the B$ array numbers (the numbers in brackets) to agree with the ascending progression of line numbers for your subroutines.

Next, update the value of X in line 10 to agree with the total number of subroutines you'll be linking and input RUN 5. When that's done, enter DELETE – 99 to eliminate Mini-Linker, and you'll be able to use the Renumber command. R

After more than 20 years working in electronics on the DEW (Distant Early Warning) line in Canada, Dale Brown now owns a fishing resort in Manitoba, where he spends the winter months playing with computers and writing.

Listing 1. Linker.

```
2Ø REM LINKER 128 - DALE S. BRO
   WN                          :REM*88
6Ø CLR:PRINTCHR$(142);         :REM*2Ø2
65 DIM B$(9)                   :REM*151
7Ø IF PEEK(215)=128 THEN BEGIN
                               :REM*98
8Ø COLOR 6,1                   :REM*138
9Ø WINDOW Ø,Ø,79,24,1          :REM*212
1ØØ PRINTTAB(2Ø)"{COMD 6}{CTRL
    9}{3 SPACEs}BASIC SUBROUTIN
    E LIBRARY LINKER           :REM*184
11Ø WINDOW Ø,1,79,24,1         :REM*4Ø
12Ø BEND:ELSE BEGIN            :REM*1Ø2
13Ø COLOR Ø,1                  :REM*14Ø
14Ø COLOR 4,1                  :REM*182
15Ø WINDOW Ø,Ø,39,24,1         :REM*12
16Ø PRINT "{CRSR RT}{COMD 6}{CT
    RL 9}{3 SPACEs}BASIC SUBROU
    TINE LIBRARY LINKER        :REM*44
17Ø WINDOW Ø,1,39,24,1         :REM*96
18Ø SCREEN=4Ø                  :REM*62
19Ø BEND                       :REM*13Ø
2ØØ PRINT"{CRSR DN}{COMD 3}{CTR
    L 9} IMPORTANT {CTRL Ø}: {C
    TRL 4}PROGRAMS MUST BE ENTE
    RED IN ORDER OF ASCENDING L
    INE NUMBERS."              :REM*1ØØ
21Ø INPUT"{2 CRSR DNs}{CTRL 6}E
    NTER FILENAME OF MAIN (LOWE
    ST NUMBERED) PROGRAM{CTRL 8
    }";B$(Ø)                   :REM*214
22Ø PRINT"{CRSR DN}{CRSR RT}{CT
    RL 4}ENTER NUMBER OF PROGRA
    M SEGMENTS TO BE LINKED WIT
    H {CTRL 8}";B$(Ø)          :REM*92
23Ø INPUT "{CTRL 4}NUMBER (1-9)
    {CTRL 8}";N$               :REM*168
24Ø IF ASC(N$)<49 OR ASC(N$)>57
     THEN 23Ø                  :REM*156
25Ø N=VAL(N$):J=1              :REM*68
26Ø DO                         :REM*181
27Ø PRINT"{CRSR DN}{CTRL 6}ENTE
    R FILENAME OF #";J;        :REM*93
28Ø IF SCREEN=4Ø THEN PRINT
                               :REM*7
29Ø INPUT"PROGRAM SEGMENT{CTRL
    8}";B$(J)                  :REM*41
3ØØ J=J+1                      :REM*51
31Ø LOOP UNTIL J>N             :REM*65
315 :                          :REM*36
32Ø INPUT"{2 CRSR DNs}{COMD 7}E
    NTER FILENAME FOR LINKED PR
    OGRAM{CTRL 8}";C$          :REM*219
33Ø J=Ø                        :REM*15
34Ø BLOAD (B$(Ø)),B1,P7168
                               :REM*251
35Ø J=1                        :REM*51
36Ø GOSUB5ØØ                  :REM*83
37Ø DO                         :REM*35
38Ø AD=((PEEK(175)*256)+PEEK(17
    4))-2                      :REM*53
39Ø BLOAD (B$(J)),B1,P(AD)
                               :REM*25
4ØØ GOSUB5ØØ                  :REM*123
41Ø J=J+1                      :REM*161
42Ø LOOP UNTIL J>N             :REM*175
43Ø DA=((PEEK(175)*256)+PEEK(17
    4))                        :REM*27
44Ø BSAVE (C$),B1,P7168 TO P(DA
    )                          :REM*163
45Ø GOSUB54Ø                   :REM*237
46Ø PRINT"{SHFT CLR}{3 CRSR DNs
    }{CTRL 4}{3 CRSR RTs}LINKED
     PROGRAM HAS BEEN SAVED UND
    ER";                       :REM*169
47Ø IF SCREEN=4Ø THEN PRINT"{CR
    SR DN}"                    :REM*247
48Ø PRINT"{CRSR RT}FILENAME: {C
```


http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/


```
    TRL 8)";C$              :REM*121
49Ø END                     :REM*237
5ØØ IF DS<2Ø THEN RETURN:REM*91
51Ø PRINT"{SHFT CLR}ERROR LOADI
    NG: ";B$(J)             :REM*17
52Ø PRINTDS$                :REM*76
53Ø END                     :REM*22
54Ø IF DS<2Ø THEN RETURN
                            :REM*132
55Ø PRINT"{SHFT CLR}ERROR SAVIN
    G: ";C$                 :REM*26
56Ø PRINTDS$                :REM*116
57Ø END                     :REM*62
```

Listing 2. LinkLDR.

```
1Ø REM LINKLDR PROGRAM   :REM*26
2Ø COLOR 6,1:WINDOW Ø,Ø,79,24,1
                         :REM*232
3Ø FOR N=Ø TO 1Ø:FOR M=2 TO 11
                           :REM*4
4Ø COLOR 5,M              :REM*222
5Ø PRINT"{CTRL 9} LINKER{2 SPAC
   Es}LOADER ";           :REM*92
6Ø NEXTM :NEXTN           :REM*56
7Ø KD$="LINKER":LN=8:GOSUB4Ø1ØØ
   :REM CALL INSERTDISK:REM*216
8Ø LN=2Ø:GOSUB 4ØØØØ:REM CALL P
   RESSKEY                :REM*152
9Ø DLOAD"LINKER":END      :REM*164
```

Listing 3. PressKey.400.

```
4ØØØØ REM * PRESSKEY.4ØØ * DEMO
      *                   :REM*122
4ØØØ5 REM LN=LINE NUMBER FOR PR
      OMPT                :REM*169
4ØØ1Ø KC=1:KS=1           :REM*5Ø
4ØØ15 WINDOW 2Ø,LN,59,LN+2,1
                          :REM*219
4ØØ2Ø IF RV$="{CTRL 9}" THEN RV
      $="{CTRL Ø}":ELSE RV$="{C
      TRL 9}"             :REM*2Ø
4ØØ25 PRINT RV$;"{HOME}{CRSR DN
      }{2 CRSR RTs}{5 SPACEs}PR
      ESS ANY KEY TO CONTINUE{5
       SPACEs}{CTRL Ø}"   :REM*75
4ØØ3Ø GOSUB 4Ø2ØØ:REM SOUNDPROM
      PT.4Ø2 SUBROUTINE MUST BE
       LINKED             :REM*168
4ØØ35 KC=KC+1:IF KC=17 THEN KC=
      2                   :REM*169
4ØØ4Ø COLOR 5,KC          :REM*74
4ØØ45 GET A$              :REM*219
4ØØ5Ø IF A$="" THEN 4ØØ2Ø
                          :REM*244
4ØØ55 WINDOW Ø,Ø,79,24,1
                          :REM*141
4ØØ6Ø RETURN              :REM*82
```

Listing 4. InsertDisk.401.

```
4Ø1ØØ REM * INSERTDISK.4Ø1 * DE
      MO *                :REM*132
4Ø11Ø REM KD$=DISKNAME :REM*188
4Ø12Ø REM LN=LINE NUMBER FOR PR
      OMPT                :REM*28
4Ø13Ø WINDOW 15,LN,64,LN+2,1
                          :REM*186
4Ø14Ø K$="PLEASE PLACE {COMD 3}
      "+KD$+"{CTRL 8} DISK IN D
      RIVE"               :REM*154
4Ø15Ø K=(5Ø-LEN(K$))/2 :REM*226
4Ø16Ø PRINT"{CTRL 8}{2 CRSR DNs
      }";TAB(K);K$        :REM*122
4Ø17Ø WINDOW Ø,Ø,79,24,Ø
                          :REM*192
4Ø18Ø RETURN              :REM*2Ø2
```

Listing 5. SoundPrompt.402.

```
4Ø2ØØ REM * SOUNDPROMPT.4Ø2 * D
      EMO *               :REM*71
4Ø2Ø5 REM KS=NUMBER OF NOTES
                          :REM*252
4Ø21Ø IF KZ=Ø THEN BEGIN:REM*65
4Ø215 PLAY "V1O4T7U8H"    :REM*4Ø
4Ø22Ø KZ=1                :REM*11
4Ø225 BEND                :REM*13Ø
4Ø23Ø KJ=Ø                :REM*117
4Ø235 DO UNTIL KJ=KS       :REM*4
4Ø24Ø KN=KN+1:IF KN>7 THEN KN=1
                          :REM*19
4Ø245 PLAY MID$("FFGAFAG",KN,1)
                          :REM*166
4Ø25Ø KJ=KJ+1              :REM*7
4Ø255 LOOP                :REM*144
4Ø26Ø RETURN               :REM*27
```

Listing 6. Mini-Linker.

```
Ø GOTO 1ØØ                :REM*186
5 CLR: REM ENTER 'RUN 5' IN DIR
  ECT MODE                :REM*243
1Ø N=X:REM X = NUMBER OF SUBROU
  TINES TO LINK           :REM*16Ø
15 DIM B$(N)              :REM*171
2Ø B$(Ø)="MAIN PROGRAM FILENAME
  "                       :REM*252
25 B$(1)="FIRST SUBROUTINE FILE
  NAME"                   :REM*75
3Ø B$(2)="SECOND SUBROUTINE FIL
  ENAME"                  :REM*166
35 B$(3)="THIRD SUBROUTINE FILE
  NAME"                   :REM*83
4Ø B$(4)="FOURTH SUBROUTINE FIL
  ENAME"                  :REM*128
45 REM CONTINUE UNTIL 'N' IN LI
  NE 1Ø IS REACHED        :REM*93
5Ø C$="FILENAME FOR LINKED PROG
  RAM"                    :REM*1Ø8
55 J=Ø:BLOAD (B$(Ø)),B1,P7168:J
  =1                      :REM*2Ø7
6Ø DO                     :REM*236
65 AD=((PEEK(175)*256)+PEEK(174
  ))-2                    :REM*249
7Ø BLOAD (B$(J)),B1,P(AD)
                          :REM*216
75 J=J+1                   :REM*81
8Ø LOOP UNTIL J>N          :REM*9Ø
85 DA=((PEEK(175)*256)+PEEK(174
  ))                      :REM*193
9Ø BSAVE (C$),B1,P7168 TO P(DA)
                          :REM*68
95 END                    :REM*97
1ØØ REM MAIN PROGRAM STARTS HER
    E                     :REM*15Ø■
```


This Publication is available in Microform.

University Microfilms International

Please send additional information
for _____
Name _____
Institution _____
Street _____
City _____
State _____ Zip _____

300 North Zeeb Road
Dept. P.R.
Ann Arbor, Mi. 48106

Attention Subscribers

We occasionally make our mailing list available to other companies or organizations with products or services which we feel might be of interest to you. If you prefer that your name be deleted from such a list, please fill out the coupon below or affix a copy of your mailing label and mail it to:

CW Communications/Peterborough
RUN
PO Box 954
Farmingdale, NY 11737

Please delete my name from mailing lists sent to other companies or organizations. RUN

Name _____

Address _____

City _____ State _____ Zip _____

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Input Sentry

Safeguard your programs against potentially disastrous input errors.

by ROBERT L. SENFT

Has your computer ever locked up while you were entering data into a spreadsheet or other number-crunching program? The chances are good that it has, especially if your software contains Basic's Input statement.

It's discouraging to get an error message after you've entered large quantities of data. And it's tedious to fix data-entry errors after you've already pressed the return key. Fortunately, these and many other data-entry problems are preventable. *Un*fortunately, numerous input routines, commercial and otherwise, don't do the job very well.

Recently, a brand name financial software package was observed to halt execution when input values were not to its liking. Each time this happened, the poor user had to turn off the computer, reload the program and start from scratch. Worse yet, he was given no clue as to what sort of error was committed. Not exactly what you would call user-friendly. There's a crying need for reliable, error-tolerant and user-considerate data-entry routines.

Many articles have addressed the Input statement's well-publicized limitations, which include the forbidden characters (commas, colons and quotation marks) as well as the sometimes cryptic error messages that can ruin the input screen format. Another nuisance is the unrestricted use of the cursor-control keys, which can lead to data errors or screen-scrolling problems.

Some, if not all, of these limitations have been solved, but many more remain. For instance, there may be times when you would like to limit maximum or minimum input values or to prevent a zero entry that might produce a "division-by-zero" error.

It would also be desirable to catch the accidental entry of alphabetic characters in numeric fields. Of even greater value would be the ability to easily identify and correct errors without leaving the data-field area. It is usually much easier to fix data problems at entry time than later, when the output is all fouled up.

At this point you may ask, "How can the Input statement, or any of its substitutes, possibly do all this?" It can't. But don't despair—here at last is Super Input, the bullet-proof utility that can and *does* do it all.

What It Offers

Super Input is a data-validation subroutine that solves all the problems ►

ILLUSTRATED BY ELIZABETH BRADY

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

Sensational Prices!
. . . On Our Most Popular Items!

from MicroPal® . . .

THE 39¢ DISKETTE!

Are you paying too much for diskettes? Try our first quality, prime, 5¼" diskettes (no rejects, no seconds) at these fantastic sale prices and save, save, SAVE! Disks are packaged in boxes of 50; including diskettes in sleeves, labels, and write-protect tabs.

Each diskette is certified to be 100% error free and comes with a lifetime warranty (if you have a problem, we'll replace the diskette). All diskettes include hub reinforcement rings and write-protect notch.

All diskettes are double density and work in either single or double density drives.

SS, DD Diskettes, Box of 50
32391 **$19.50–39¢ ea.!**

DS, DD Diskettes, Box of 50
32403 **$24.50–49¢ ea.!**

POWER and PROTECTION FOR YOUR C-64!®

POW'R PAK 64

from MicroPal®

Pow'r Pak is a replacement power supply (1.5 amp) for the Commodore 64® . . . but that's not all! Pow'r Pak also supplies two additional surge protected outlets (120V) for monitor, disk drive, or other peripherals. On/off switch. Fuse protection. Sturdy all-metal casing is ventilated for heat dissipation. Full 1 year warranty.

34910 **$49.95**

star

$174.95
NP-10

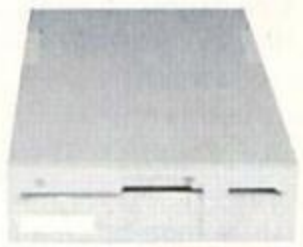
- 25 cps in NLQ
- One-Year Warranty
- 100 cps in Draft Mode
- Ideal for Home or School
- Unbeatable Low Price

64204 NP-10 Printer **$174.95**

Other Fine Star Printers:

41366 NX-10 . . . . . **$Call For Lowest Price**
55766 NX-10C . . . . . **$Call For Lowest Price**

$159



Commodore Compatible
5¼" Disk Drive

• Runs All C-64 Commercial Software •
• Ready to Run Right From the Box •
• Full 6 Month Warranty •

66166 Disk Drive **$159.00**

No Catches! Nothing Else To Buy!

★ THE BEST PRICES ★
★ THE BEST SERVICE ★
WHY SHOP ANYWHERE ELSE?

THE FAMOUS SLIK STIK™

The Slik Stik™ has been a favorite for years . . . and for good reason. It's just the right combination of responsiveness and accuracy. And the price can't be beat! From Suncom. 90 day warranty. Connects directly to Commodore Computers.

42086 **$6.95**

ONLY $6.95!

Space Saving Printer Stand

At last a printer stand priced for homes and small offices! This great stand from Suncom is elevated so you can place your paper underneath. Features heavy duty welded steel wire construction and has a vinyl coating to reduce noise and vibration. Another plus . . . the printer is held at an angle that makes it much easier to see your output as it is being printed. Available in two widths: 12" for most 80 column printers, and 18" for most 132 column printers.

33232 12" Printer Stand . . . . . (Was $14.95) **ONLY $ 6.95**
33246 18" Printer Stand . . . . . (Was $22.95) **ONLY $12.95**

NEW LOW PRICES!

Paper Tray

Ever wondered what to do with the printout that comes out of the printer and tends to spill all over the table and floor? The Suncom Paper Tray attaches to the rear of all Suncom stands and receives the printed paper as it comes out of the printer. Helps to neatly fold and stack it!

Sug. Retail $14.95
42091 . . . . . **$11.95**

Super Deal On Diskette Storage!

ONLY $9.95

- A whopping 100 disk (5¼") capacity.
- Lock and keys for extra security and easy carrying.
- Includes 8 index dividers with labels for organization of filing and retrieval.
- Made of durable anti-static, high impact plastic.
- Attractive smoked color lid.

Sug. Retail $19.95
66826 **NOW ONLY $9.95**

DUST COVER and "EVERYTHING BOOK" SPECIAL OFFER

Get to know us by ordering this great dust cover for your C-64 or C-128 and our catalog, "The Everything Book for the C-64 and C-128 Home Computers," for $2.95 (no extra shipping and handling charges). Cover is antistatic, translucent 8-gauge vinyl sewn to our exacting standards with reinforced seams. Discover the savings and easy shipping available from TENEX Computer Express!

$2.95

31627 C-64 Dust Cover and Catalog (R2F)
38464 C-128 Dust Cover and Catalog (R2F)
65180 C-64C Dust Cover and Catalog (R2F)

The Right Interface For All Your Printing Needs!!

PPI with graphics

". . . a sound investment for your Commodore." RUN, Dec. '85

This high-performance graphics parallel printer interface from DSI for C-64 and VIC-20 emulates a Commodore printer. Comes with cables and user's manual.

33565 . . . . . **$39.95**

Super Graphix. Features 8K buffer, 10 printing modes, 3 internal screen dumps and top mounted dip switches. Supports superscript, subscript, underlining, bold face, and a choice of 9 character widths. From Xetec.

41769 . . . . . **$69.95**

Super Graphix Jr. A more economical version of the Super Graphix, featuring graphics, normal and correspondence quality printing. Compatible with all major printers. From Xetec.

41774 . . . . . **$49.95**

From Your Friends At

TENEX Computer Express™

We gladly accept mail orders!

P.O. Box 6578
South Bend, IN 46660

Questions? Call 219/259-7051

Ad R2F

SHIPPING CHARGES

ORDER AMOUNT	CHARGE
less than $20.00	$3.75
$20.00–$39.99	4.75
$40.00–$74.99	5.75
$75.00–$149.99	6.75
$150.00–$299.99	7.75
$300 & up	8.75

MasterCard VISA

NO EXTRA FEE FOR CHARGES
WE VERIFY CHARGE CARD ADDRESSES

ORDER TOLL FREE
1-800-348-2778
INDIANA ORDER LINE 1-800-225-6838

COMMODORE 64 is a registered trademark; and COMMODORE 128 is a trademark of Commodore Electronics, Ltd. Foreign Orders add $4.00; heavy items ship at actual cost.
NOTE: Due to publishing lead-times, product prices and specifications are subject to change without notice.

http://www.oldgamesitalia.net/

Circle 155 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

mentioned above and provides many additional features, as follows.

- Decimal justification in numeric fields.
- Controlled field length and field positioning.
- Field area underlining, if desired.
- Audiovisual alert of improper entries.
- Error message and correction on bottom line of screen.
- Cursor on-off control.
- Crash-proof input sequence.

Here's how it works. First, nine control variables that define the data-input parameters are passed to Super Input. You must assign appropriate values to these variables prior to accessing the subroutine for the first time. You can do this on a variable-by-variable basis or with a Gosub 70, which sets them all to default values. (The values in line 70 were chosen to work with the demo program, lines 0–9 in Listing 1, and can be changed to suit your specific needs.) See Table 1 for the list of control variables and their functions.

Super Input was designed to be easily merged with any Basic program. All internal variable names consist of two alphabetic characters that begin with the letter X. Be careful not to use the field-control variables outside the subroutine.

The demo program (lines 0–9 in Listing 1) illustrates some of the possible entry formats. All data is printed to the screen at the end of the input sequence, or whenever the CTRL and left-arrow keys are pressed.

The last four Pokes in line 0 disable the run-stop key and should be omitted until the entire listing is entered, debugged and saved. Otherwise, after attempting a run, you may inadvertently lose the whole program. These Pokes make Super Input crash-proof and must be included in your main program if you want to retain this feature. Also, don't forget to delete the demo lines when merging Super Input with your own software.

Pointers To Heed

When using Super Input in conjunction with any of your programs, keep the following points in mind.

1. Make sure you initially assign acceptable values to the appropriate control variables. If you omit this step, all variables will be equal to 0, which is unacceptable for DP, FL and FP.

Also, since some control variables are interdependent, restrictions are placed on certain combinations. These restrictions, plus acceptable ranges for all control variables, are stated in Table 1. A Gosub 70 in your Basic program, prior to accessing Super Input, will assign acceptable default values to all variables.

2. Make sure your data field does not attempt to wrap around to the next screen row. An example of this would be a field position, FP, of 20 and a field length, FL, of 30. Hence, the (FP + FL)<40 restriction.

3. Whenever you print an input prompt message, Super Input will attempt to place the data field on the same screen line, at whatever column your FP or DP assignments dictate. Make sure these control variables are sufficiently large to prevent the data from overwriting your prompt.

When your data field is too long to fit on the same line with the prompt, insert one or more blank Print statements, before the Super Input Gosub statement, to move the data field down a corresponding number of lines.

4. All control variables retain their current values until new ones are assigned. It is therefore unnecessary to reassign values each time you access Super Input, as long as the data items are similar. Change these variables only when the nature of the expected input requires it.

5. Super Input will accept an open quote in a string data field. However, if you later attempt to print this field from your Basic program, it's possible to run into some problems. Insert a POKE 212,0 immediately after your Print statement to terminate the Quote mode and prevent the printing of garbage following the data field.

Listing 2, a home inventory Basic program format example, illustrates how to integrate Super Input into your program. If you wish to try this, proceed as follows:

1. Load Listing 1, Super Input, as listed.
2. Delete lines 0–9.
3. Add Listing 2 to Listing 1 and save to tape or disk.
4. Run combined Listing 1/Listing 2 program.

Using Super Input

Once you've loaded and run Listing 1, print your Input prompt message and enter GOSUB 10 (for string inputs) or GOSUB 11 (for numeric inputs). When entering strings, the cursor will appear at the specified column position, FP, on the same row with your prompt message. The field underline, if on, will extend right from the cursor by an amount equal to FL.

The numeric input is similar, except that the cursor appears at the specified decimal position, DP. All digits will scroll left until the decimal key is pressed. However, characters that would otherwise force the entry to extend beyond the underlined area will not be accepted. One exception is a leading plus or minus sign, which can extend one column left of the normal field area. This accommodation prevents sign prefixes from occupying a normally available digit position.

As you input information, each character is checked for proper type and, if correct, accumulated in a string variable. The entry is terminated with the return key. In the event of an input type or parameter error, you'll be notified visually (border flashes red) and audibly (short beep). A message describing the error and needed corrective action is displayed, after which the cursor returns

TABLE 1. Control variables and their functions.

Variable	Function	Range	Data Type
CU	Cursor switch (1 = on, 0 = off)	0 or 1	all
DD	Maximum number of decimal digits permitted	0–36	numeric
DP	Decimal position (column number)	2–38	numeric
FL	Field length (maximum number of characters)	1–37	string
FP	Field position (start column number)	2–38	string
HI	High input value limit	*	numeric
LO	Low input value limit	*	numeric
NZ	Zero input allowed (0 = yes, 1 = no)	0 or 1	numeric
UL	Underline data field (1 = yes, 0 = no)	0 or 1	all

Restrictions: (FP + FL)<40 and (DP + DD)<39
DP> (number of HI or LO significant digits) + 1
*HI and LO limit range is −999999999 to +999999999 and HI>LO

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

to its last occupied field position and awaits your response. Also, the return key is temporarily disabled to prevent the accidental entry of incorrect data.

At this or any other point during data entry, you can edit with either the insert/delete key, which functions as a backspace, deleting characters as it moves left, or the left-arrow key, which erases the entire field. Either one of these two editing actions reenables the return key, which permits entry of corrected data.

In the event that Super Input excluded the error-causing keystroke, but you wish to enter the data "as is," press the return key twice, and—assuming no further errors—your entry will be executed. Note that under no circumstances can you move the cursor outside the designated field area. The normal cursor keys are inoperative.

Upon return from Super Input, the variable I$ contains a string representation of your data. If the input was numeric, variable IV contains the floating-point value. At this time, it's up to you to determine where and how to store the data. This detail must be taken care of, as both I$ and IV will have new values when the next data item is entered.

Note that each data item is limited to one screen line (a maximum of 37 characters). Normally, this is more than adequate for most database applications. Graphics characters will not be accepted at any time, and only numbers or leading plus or minus signs will be permitted in numeric fields. In instances when your input value cannot be 0, set NZ equal to 1.

You can set the range of input values by assigning the desired high limit to variable HI and the low limit to variable LO. The left-of-decimal field length is automatically set to accommodate the larger of the absolute values of the HI or LO limits. The remaining control variable functions should be relatively self-evident from Table 1.

To escape the data entry sequence, press the control and left-arrow keys together; this sets internal variable XA equal to 6 and returns you to your main program. You may then branch to wherever you desire with an "IF XA=6 THEN whatever" statement following a Gosub to the Super Input routine. If this check is omitted, then the control and left-arrow combination simply imitates the return key.

Super Input eliminates the normally time-consuming and error-prone aspects of data entry. Take advantage of it. Ⓡ

LISTING 1. Super Input program.

```
Ø POKE5328Ø,Ø:POKE53281,Ø:POKE7
  49,165:POKE75Ø,145:POKE751,96
  :POKE8Ø9,2              :REM*3Ø
1 PRINT"{SHFT CLR}{CTRL 8}{CTRL
   9} EXIT = CTRL + {LEFT ARROW
  } ":PRINT:PRINTTAB(12)"DATA E
  NTRY DEMO":I=Ø:GOSUB7Ø:REM*75
2 PRINT:PRINT"ENTER YOUR NAME":
  X=1:GOSUB7:X=2:       :REM*116
3 R=RND(1)*9:HI=INT(4{UP ARROW}
  R):LO=HI-5ØØØØØ:PRINT:PRINT"E
  NTER "LO"< # <"HI:GOSUB7
                          :REM*5
4 GOSUB7Ø:PRINT:PRINT"ENTER NON
  -ZERO QUANTITY":NZ=1:GOSUB7
                          :REM*6Ø
5 PRINT:PRINT"NO ENTRY FIELD UN
  DERLINE":NZ=Ø:UL=Ø:GOSUB7:UL=
  1:PRINT:FORJ=1TO2       :REM*99
6 PRINT"ENTER 3 #'S":FORK=ØTO2:
  DP=18+9*K:GOSUB7:NEXTK,J:GOTO
  8                       :REM*22Ø
7 ONXGOSUB1Ø,11:IA$(I)=I$:ON-(X
  A=6)GOTO8:I=I+1:RETURN:REM*89
8 PRINT:PRINT"{CTRL 4)********
  EXIT DATA ENTRY MODE ********
  "                       :REM*7Ø
9 PRINT:FORJ=ØTO4:PRINTIA$(J);:
  POKE212,Ø:PRINTTAB(2Ø)IA$(J+5
  ):NEXT:END              :REM*135
1Ø XP=FP:XD=FL-1:XV=Ø:XX=1:XZ=1
  :GOTO13                 :REM*26
11 XX=Ø:XZ=Ø:XN=HI:IFABS(HI)<AB
  S(LO)THENXN=LO          :REM*85
12 XV=LEN(STR$(INT(XN)))-1:XP=D
  P:XD=DD:IFABS(XN)<1THENXV=Ø
                          :REM*96
13 XS=1:XL=Ø:XY=Ø:I$="":IFXH=ØT
  HENGOSUB6Ø              :REM*129
14 IFUL=1THENPRINTTAB(XP-XV-1);
  :FORXN=ØTOXV+XD:PRINT"{COMD
  T}";:NEXT               :REM*25Ø
15 PRINT"{2 CRSR UPs}":PRINTTAB
  (XP-XL-1)I$;:POKE212,Ø
                          :REM*127
16 FORXN=1TO3Ø:GETXG$:IFXG$<>""
  THENPRINT" {CRSR LF}";:GOTO2
  1                       :REM*122
18 IFXN<16THENPRINTXC$(CU);:NEX
  T                       :REM*122
2Ø PRINT" {CRSR LF}";:NEXT:GOTO
  16                      :REM*182
21 XA=ASC(XG$):ON-(XA<32ORXA>94
  )GOTO33:IFXZ=1THEN26:REM*253
22 ON-(XA>47ANDXA<58)GOTO26:IFX
  A=46THENXN=8:ON-(XX=1)GOTO5Ø
  :XX=1:GOTO26            :REM*236
23 IFXA<>45ANDXA<>43THENXN=4:GO
  TO5Ø                    :REM*19
24 IFI$=""THENXS=Ø:GOTO26
                          :REM*252
25 XN=6:GOTO5Ø            :REM*199
26 IFLEN(I$)>XV-XSANDXX=ØTHENXN
  =2:GOTO5Ø               :REM*72
28 IFXX=ØTHENXL=XL+1:GOTO31
                          :REM*124
3Ø XY=XY+1:IFXY>XD+1THENXY=XY-1
  :XN=1+XZ:GOTO5Ø         :REM*16
31 IFXO=2THENXO=1         :REM*3
32 I$=I$+XG$:PRINT:GOTO15
                          :REM*12Ø
33 ON-(XA=13)-2*(XA=6)-3*(XA=2Ø
  )-4*(XA=95)GOTO34,34,42,55:X
  N=4-XZ:GOTO5Ø           :REM*87
34 ON-(XZ=1)GOTO37:IV=VAL(I$):I
  FNZ=1ANDIV=ØTHENXN=5:GOTO5Ø
                          :REM*3Ø
35 XN=7:ON-(IV>HI)-2*(IV<LO)GOT
  O58,59                  :REM*25
37 IFXO=1THENXN=Ø:GOTO52
                          :REM*253
38 IFXO=2THENXO=1:GOTO16:REM*72
39 IFUL=1THENPRINT:PRINTXM$(Ø)"
  {2 CRSR UPs}"           :REM*75
4Ø PRINT:RETURN           :REM*72
42 XO=1:IFLEN(I$)<1THEN16
                          :REM*2Ø6
44 IFXX=1THENPRINT"{CRSR LF} {C
  RSR LF}":GOTO46         :REM*126
45 PRINT"{CRSR UP}":PRINTTAB(XP
  -XV-2):FORXN=ØTOXV+XD+1:PRIN
  T" ";:NEXT:PRINT:XL=XL-1
                          :REM*1Ø3
46 IFRIGHT$(I$,1)="."ANDXZ=ØTHE
  NXX=Ø:XY=XY-1           :REM*66
47 IFI$="+"ORI$="-"THENXS=1
                          :REM*71
48 I$=LEFT$(I$,LEN(I$)-1):ON-(X
  X=Ø)GOTO15:XY=XY-1:GOTO15
                          :REM*156
5Ø POKE54277,7:POKE54276,17:POK
  E54273,8Ø:POKE54272,97:XB=PE
  EK(5328Ø)               :REM*46
51 POKE5328Ø,1Ø:FORXI=1TO15Ø:NE
  XT:POKE54276,Ø:POKE5328Ø,XB:
  XQ=PEEK(211)            :REM*255
52 XM=PEEK(214):XJ=PEEK(646):FO
  RXI=XMTO23:PRINT:NEXT:PRINT"
  {CTRL 9}{COMD 3}"XM$(XN);:XO
  =2                      :REM*126
53 POKE646,XJ:FORXI=XMTO23:PRIN
  T"{2 CRSR UPs}":NEXT:IFXN=ØT
  HENXO=Ø:GOTO39          :REM*13
54 PRINTTAB(XQ):GOTO16    :REM*15Ø
55 XO=1:XL=Ø:XS=1:XX=Ø:XY=Ø:I$=
  "":PRINT"{CRSR UP}":PRINTTAB
  (XP-XV-2);:IFXZ=1THENXX=1
                          :REM*157
56 FORXN=ØTOXV+XD+1:PRINT" ";:N
  EXT:PRINT"{CRSR UP}":PRINTTA
  B(XP-XL-1);:GOTO16      :REM*8Ø
58 XM$(7)=LEFT$("{5 SPACEs}ENTE
  R VALUE < OR ="+STR$(HI)+"{1
  Ø SPACEs}",39):GOTO5Ø:REM*26
59 XM$(7)=LEFT$("{3 SPACEs}ENTE
  R VALUE > OR ={2 SPACEs}"+ST
  R$(LO)+"{9 SPACEs}",39):GOTO
  5Ø                      :REM*255
6Ø XM$(Ø)="{CTRL Ø}{39 SPACEs}" ►
```

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/


```
   :POKE54296,15          :REM*134
61 XM$(1)="{3 SPACEs}TOO MANY D
   ECIMAL DIGITS ATTEMPTED.{2 S
   PACEs}":XC$(Ø)=" {CRSR LF}":
   XC$(1)="{CTRL 9} {CTRL Ø}{CR
   SR LF}"                :REM*9
62 XM$(2)=" LAST KEY ENTRY EXCE
   EDED FIELD LENGTH{2 SPACEs}"
                          :REM*2
63 XM$(3)="{2 SPACEs}ENTER ALPH
   ANUMERIC CHARACTERS ONLY.{2
   SPACEs}"               :REM*77
64 XM$(4)=" ENTER NUMBERS OR LE
   ADING +/-SIGN ONLY ":REM*12Ø
65 XM$(5)="{4 SPACEs}PLEASE ENT
   ER NON-ZERO QUANTITY.{4 SPAC
   Es}"                   :REM*113
66 XM$(6)="{2 SPACEs}IMBEDDED +
    OR - SIGN NOT PERMITTED.{2
   SPACEs}"               :REM*242
68 XM$(8)="{2 SPACEs}EXTRA DECI
   MAL POINT ENTRY ATTEMPTED{2
   SPACEs}":XH=1:RETURN :REM*78
7Ø CU=1:DD=2:DP=36:FL=16:FP=23:
   HI=9ØØ:LO=-9ØØ:NZ=Ø:UL=1:RET
   URN                    :REM*116
```

LISTING 2. Home inventory Basic program format example.

```
1 GOTO1ØØ                 :REM*187
1Ø XP=FP:XD=FL-1:XV=Ø:XX=1:XZ=1
   :GOTO13                :REM*26
11 XX=Ø:XZ=Ø:XN=HI:IFABS(HI)<AB
   S(LO)THENXN=LO         :REM*85
12 XV=LEN(STR$(INT(XN)))-1:XP=D
   P:XD=DD:IFABS(XN)<1THENXV=Ø
                          :REM*96
13 XS=1:XL=Ø:XY=Ø:I$="":IFXH=ØT
   HENGOSUB6Ø             :REM*129
14 IFUL=1THENPRINTTAB(XP-XV-1);
   :FORXN=ØTOXV+XD:PRINT"{COMD
   T}";:NEXT              :REM*25Ø
15 PRINT"{2 CRSR UPs}":PRINTTAB
   (XP-XL-1)I$;:POKE212,Ø
                          :REM*127
16 FORXN=1TO3Ø:GETXG$:IFXG$<>""
   THENPRINT" {CRSR LF}";:GOTO2
   1                      :REM*122
18 IFXN<16THENPRINTXC$(CU);:NEX
   T                      :REM*122
2Ø PRINT" {CRSR LF}";:NEXT:GOTO
   16                     :REM*182
21 XA=ASC(XG$):ON-(XA<32ORXA>94
   )GOTO33:IFXZ=1THEN26:REM*253
22 ON-(XA>47ANDXA<58)GOTO26:IFX
   A=46THENXN=8:ON-(XX=1)GOTO5Ø
   :XX=1:GOTO26           :REM*236
23 IFXA<>45ANDXA<>43THENXN=4:GO
   TO5Ø                   :REM*19
24 IFI$=""THENXS=Ø:GOTO26
                          :REM*252
25 XN=6:GOTO5Ø            :REM*199
26 IFLEN(I$)>XV-XSANDXX=ØTHENXN
   =2:GOTO5Ø              :REM*72
28 IFXX=ØTHENXL=XL+1:GOTO31
                          :REM*124
3Ø XY=XY+1:IFXY>XD+1THENXY=XY-1
   :XN=1+XZ:GOTO5Ø        :REM*16
31 IFXO=2THENXO=1          :REM*3
32 I$=I$+XG$:PRINT:GOTO15
                          :REM*12Ø
33 ON-(XA=13)-2*(XA=6)-3*(XA=2Ø
   )-4*(XA=95)GOTO34,34,42,55:X
   N=4-XZ:GOTO5Ø          :REM*87
34 ON-(XZ=1)GOTO37:IV=VAL(I$):I
   FNZ=1ANDIV=ØTHENXN=5:GOTO5Ø
                          :REM*3Ø
35 XN=7:ON-(IV>HI)-2*(IV<LO)GOT
   O58,59                 :REM*25
37 IFXO=1THENXN=Ø:GOTO52
                          :REM*253
38 IFXO=2THENXO=1:GOTO16:REM*72
39 IFUL=1THENPRINT:PRINTXM$(Ø)"
   {2 CRSR UPs}"          :REM*75
4Ø PRINT:RETURN           :REM*72
42 XO=1:IFLEN(I$)<1THEN16
                          :REM*2Ø6
44 IFXX=1THENPRINT"{CRSR LF} {C
   RSR LF}":GOTO46        :REM*126
45 PRINT"{CRSR UP}":PRINTTAB(XP
   -XV-2):FORXN=ØTOXV+XD+1:PRIN
   T" ";:NEXT:PRINT:XL=XL-1
                          :REM*1Ø3
46 IFRIGHT$(I$,1)="."ANDXZ=ØTHE
   NXX=Ø:XY=XY-1          :REM*66
47 IFI$="+"ORI$="-"THENXS=1
                          :REM*71
48 I$=LEFT$(I$,LEN(I$)-1):ON-(X
   X=Ø)GOTO15:XY=XY-1:GOTO15
                          :REM*156
5Ø POKE54277,7:POKE54276,17:POK
   E54273,8Ø:POKE54272,97:XB=PE
   EK(5328Ø)              :REM*46
51 POKE5328Ø,1Ø:FORXI=1TO15Ø:NE
   XT:POKE54276,Ø:POKE5328Ø,XB:
   XQ=PEEK(211)           :REM*255
52 XM=PEEK(214):XJ=PEEK(646):FO
   RXI=XMTO23:PRINT:NEXT:PRINT"
   {CTRL 9}{COMD 3}"XM$(XN);:XO
   =2                     :REM*126
53 POKE646,XJ:FORXI=XMTO23:PRIN
   T"{2 CRSR UPs}":NEXT:IFXN=ØT
   HENXO=Ø:GOTO39         :REM*13
54 PRINTTAB(XQ):GOTO16    :REM*15Ø
55 XO=1:XL=Ø:XS=1:XX=Ø:XY=Ø:I$=
   "":PRINT"{CRSR UP}":PRINTTAB
   (XP-XV-2);:IFXZ=1THENXX=1
                          :REM*157
56 FORXN=ØTOXV+XD+1:PRINT" ";:N
   EXT:PRINT"{CRSR UP}":PRINTTA
   B(XP-XL-1);:GOTO16     :REM*8Ø
58 XM$(7)=LEFT$("{5 SPACEs}ENTE
   R VALUE LESS THAN "+STR$(HI)
   +"{1Ø SPACEs}",39):GOTO5Ø
                          :REM*1Ø8
59 XM$(7)=LEFT$("{3 SPACEs}ENTE
   R VALUE GREATER THAN "+STR$(
   LO)+"{9 SPACEs}",39):GOTO5Ø
                          :REM*85
6Ø XM$(Ø)="{CTRL Ø}{39 SPACEs}"
   :POKE54296,15          :REM*134
61 XM$(1)="{3 SPACEs}TOO MANY D
   ECIMAL DIGITS ATTEMPTED.{2 S
   PACEs}":XC$(Ø)=" {CRSR LF}":
   XC$(1)="{CTRL 9} {CTRL Ø}{CR
   SR LF}"                :REM*9
62 XM$(2)=" LAST KEY ENTRY EXCE
   EDED FIELD LENGTH{2 SPACEs}"
                          :REM*2
63 XM$(3)="{2 SPACEs}ENTER ALPH
   ANUMERIC CHARACTERS ONLY.{2
   SPACEs}"               :REM*77
64 XM$(4)=" ENTER NUMBERS OR LE
   ADING +/-SIGN ONLY ":REM*12Ø
65 XM$(5)="{4 SPACEs}PLEASE ENT
   ER NON-ZERO QUANTITY.{4 SPAC
   Es}"                   :REM*113
66 XM$(6)="{2 SPACEs}IMBEDDED +
    OR - SIGN NOT PERMITTED.{2
   SPACEs}"               :REM*242
68 XM$(8)="{2 SPACEs}EXTRA DECI
   MAL POINT ENTRY ATTEMPTED{2
   SPACEs}":XH=1:RETURN :REM*78
7Ø CU=Ø:DD=3:DP=35:FL=1Ø:FP=25:
   HI=1ØØ:LO=Ø:NZ=1:UL=1:RETURN
                          :REM*14
1ØØ POKE749,165:POKE75Ø,145:POK
   E751,96:POKE8Ø9,2      :REM*148
11Ø POKE5328Ø,Ø:POKE53281,Ø:GOS
   UB7Ø                   :REM*142
12Ø N=N+1:PRINTCHR$(147)"{CTRL
   8}HOME INVENTORY RECORD - -
    - ITEM #"N            :REM*214
125 PRINT"{36 COMD Ts}":REM*127
13Ø PRINT"ITEM CATEGORY =":FP=1
   8:FL=1Ø:GOSUB1Ø:IN$(N,1)=I$
                          :REM*166
14Ø PRINT"{CRSR DN}ITEM NAME{5
   SPACEs}=":FL=21:GOSUB1Ø:IN$
   (N,2)=I$               :REM*52
145 PRINT"{CRSR DN}DESCRIPTION{
   3 SPACEs}={2 SPACEs}{COMD *
   }{SHFT LB.}":PRINT"{CRSR DN
   }":FL=37:FP=2:GOSUB1Ø:IN$(N
   ,3)=I$                 :REM*1Ø5
15Ø PRINT"{CRSR DN}LOCATION{6 S
   PACEs}=":FP=18:FL=15:GOSUB1
   Ø:IN$(N,4)=I$          :REM*174
16Ø PRINT"{CRSR DN}QUANTITY{6 S
   PACEs}=":DP=24:DD=Ø:NZ=1:LO
   =Ø:HI=1ØØØ:GOSUB11:IN$(N,5)
   =I$:QT=IV              :REM*1Ø
17Ø PRINT"{CRSR DN}UNIT COST{5
   SPACEs}=":DD=2:NZ=Ø:HI=1ØØØ
   ØØ:GOSUB11:IN$(N,6)=I$:CO=I
   V                      :REM*148
18Ø PRINT"{CRSR DN}DATE ACQUIRE
   D{2 SPACEs}=":FL=8:GOSUB1Ø:
   IN$(N,7)=I$            :REM*32
19Ø PRINT"{2 CRSR DNs}TOTAL VAL
   UE THIS ITEM = $"QT*CO
                          :REM*6
2ØØ PRINT"{3 CRSR DNs}MORE ITEM
   S TO ENTER?{2 SPACEs}(Y OR
   N)"                    :REM*9Ø
21Ø GETA$:IFA$=""THEN21Ø
                          :REM*182
22Ø IFA$="Y"THEN12Ø       :REM*172
23Ø IFA$<>"N"THEN21Ø      :REM*48
24Ø PRINTCHR$(147):FORJ=1TON:FO
   RK=1TO7:PRINTIN$(J,K):POKE2
   12,Ø:NEXT:PRINT:NEXT:REM*16
```

■

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

EASY APPLICATIONS

FLASH CARDS: If your child is learning arithmetic, or you're a bit rusty yourself, use this program for review.

by BARBARA SCHULAK

During summer vacation, reviewing school subjects with your children can be a good idea, but you'll want to make it fun. Flash Cards is a program I wrote that fits the bill by turning arithmetic review into a game. You'll find it useful not only for vacation-time review, but to reinforce your child's learning throughout the year. Perhaps you'd enjoy practicing on it, too, if your calculator has erased the multiplication tables from your memory.

Flash Cards provides flash card-type practice on the computer, eliminating the need to buy or make sets of paper cards. The program is designed for interactive use between a child and parent, but youngsters can use it alone to a certain extent. A joystick plugged into port 2 is required for operation.

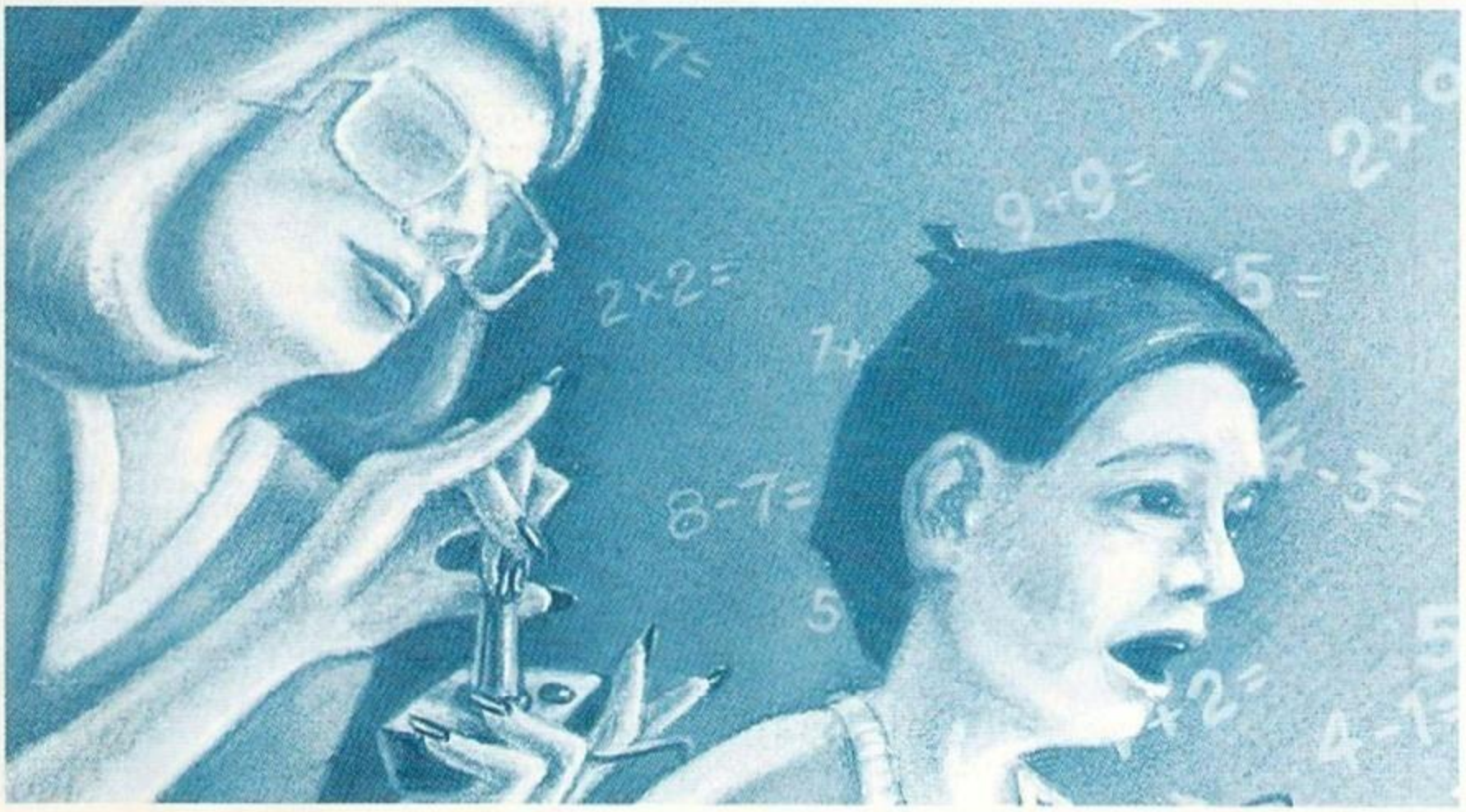
Type in Listing 1 and save it to disk. Then run the program. First it will ask for the type of problem your child wants to practice: addition, subtraction, multiplication, division or an assortment of all four.

Then you must select the range, 0–9, of numbers to be used. For example, if you choose 0 as the lower limit and 5 as the upper limit after selecting multiplication, you'll get problems with a multiplier in the range 0–5 and a multiplicand (the number being multiplied) in the range 0–9. If you specify the same number for both the lower and upper limits, your child can practice just one multiplication table, such as 5 times 0 through 9. This flexibility in choosing numbers makes Flash Cards appropriate for children at all levels.

Your final choice is how long the program should run. You can select any length of time from one to nine minutes, depending on your child's attention span.

After you've responded to all the options, Flash Cards will begin displaying problems in large numerals on the screen. When your child gives a correct answer, push the joystick fire-button to advance to the next problem. If the child doesn't know the answer to a problem, push the joystick in the up direction to display the answer. Then, push the fire-button to move to the next problem.

Continue this process until time runs out. At the end of the program, the time elapsed and number of problems answered correctly are displayed. Press Y to play again.►



ILLUSTRATED BY KEN CONDON

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

I deliberated long and hard on whether to make Flash Cards respond to keyboard replies or to require a person-to-person verbal response. I finally settled on the verbal response, even though the computer can't check the correctness of the answers, because I felt typing might slow a child down in a speed drill. Also, verbal responses get parents involved in the learning experience.

My children have enjoyed Flash Cards, and their math skills have improved rapidly. I hope you and your youngsters enjoy it, too. R

Barbara H. Schulak, a programmer who's published a number of articles, is also the mother of two school children.

LISTING 1. Flash Cards program.

```
1Ø X=RND(-TI):S=54272:NP=Ø:DIMA
   $(9,5)                  :REM*66
2Ø W$="FLASH CARDS"     :REM*114
3Ø POKE53281,Ø:PRINT"{SHFT CLR}
   {CTRL 8}"               :REM*212
4Ø FORI=ØTO24:POKES+I,Ø:NEXT
                           :REM*198
5Ø FORI=1TO11:PRINT"{HOME}{1Ø C
   RSR DNs}"SPC(14)LEFT$(W$,I):
   POKE5328Ø,I:GOSUB133Ø:NEXT
                           :REM*146
6Ø FORI=ØTO9:FORJ=1TO5  :REM*12Ø
7Ø READA$(I,J)          :REM*186
8Ø NEXT:NEXT             :REM*84
9Ø PRINT"{SHFT CLR}{CTRL 9}{COM
   D 1}{14 SPACEs}FLASH CARDS{1
   5 SPACEs}"            :REM*184
1ØØ PRINT"{3 CRSR DNs}{CTRL 2}"
    SPC(5)"[1] ADDITION :REM*4Ø
11Ø PRINTSPC(5)"[2] SUBTRACTION
                           :REM*192
12Ø PRINTSPC(5)"[3] MULTIPLICAT
   ION                     :REM*68
13Ø PRINTSPC(5)"[4] DIVISION
                           :REM*218
14Ø PRINTSPC(5)"[5] MIXED
                           :REM*198
15Ø GETK$:IFK$=""THEN15Ø
                           :REM*178
16Ø T1=VAL(K$):IFT1<1ORT1>5THEN
   9Ø                      :REM*18
17Ø T2=T1:IFT1=5THENT2=1
                           :REM*2ØØ
18Ø :                      :REM*156
19Ø PRINT"{SHFT CLR}{CTRL 9}{CO
   MD 6}{13 SPACEs}FLASH CARDS
   {16 SPACEs}"          :REM*38
2ØØ PRINT"{3 CRSR DNs}{CTRL 2}{
   2 SPACEs}LOWER LIMIT OF PRO
   BLEMS (Ø-9):";        :REM*13Ø
21Ø GETK$:IFK$=""THEN21Ø:REM*12
22Ø R1=VAL(K$):IFR1<ØORR1>9THEN
   2ØØ                     :REM*8Ø
23Ø PRINTK$                :REM*232
24Ø PRINT"{3 CRSR DNs}{CTRL 2}{
   2 SPACEs}UPPER LIMIT OF PRO
   BLEMS (Ø-9):";        :REM*1Ø2
25Ø GETK$:IFK$=""THEN25Ø:REM*54
26Ø R2=VAL(K$):IFR2<ØORR>9THEN2
   4Ø                      :REM*1Ø5
27Ø PRINTK$                :REM*17
28Ø IFR1>R2THEN19Ø         :REM*65
29Ø R2=R2+1                :REM*137
3ØØ IFT1=4ORT1=5ANDR1=ØANDR2=1T
   HEN146Ø                 :REM*129
31Ø :                      :REM*31
32Ø PRINT"{SHFT CLR}{CTRL 9}{CO
   MD 7}{13 SPACEs}FLASH CARDS
   {16 SPACEs}"          :REM*233
33Ø PRINT"{3 CRSR DNs}{CTRL 2}"
   SPC(5)"PLAYING TIME (1-9 MI
   N): "                   :REM*9
34Ø GETK$:IFK$=""THEN34Ø
                           :REM*113
35Ø TM=VAL(K$):IFTM<1ORTM>9THEN
   32Ø                     :REM*151
36Ø TM=TM*1ØØ              :REM*215
37Ø PRINT"{SHFT CLR}{CTRL 9}{CT
   RL 5}{13 SPACEs}FLASH CARDS
   {16 SPACEs}"          :REM*157
38Ø PRINT"{5 CRSR DNs}{CTRL 2}"
   SPC(3)"PRESS {CTRL 9}FIRE{C
   TRL Ø} TO MOVE TO NEXT PROB
   LEM                     :REM*45
39Ø PRINTSPC(3)"{CRSR DN}MOVE J
   OYTICK {CTRL 9}UP{CTRL Ø} F
   OR ANSWER              :REM*139
4ØØ FORT=1TO2ØØØ:NEXT      :REM*25
41Ø :                      :REM*131
42Ø TI$="ØØØØØØ"           :REM*147
43Ø ONT1GOSUB1Ø7Ø,112Ø,118Ø,123
   Ø,129Ø                  :REM*139
44Ø ONT2GOSUB62Ø,74Ø,87Ø,99Ø
                           :REM*147
45Ø FB=PEEK(5632Ø)AND16:FR=15-(
   PEEK(5632Ø)AND15)       :REM*45
46Ø IFFR=1THENGOSUB139Ø    :REM*83
47Ø IFVAL(TI$)>TMTHEN54Ø:REM*51
48Ø IFFB<>ØTHEN45Ø         :REM*197
49Ø NP=NP+1:GOSUB133Ø      :REM*19
5ØØ IFFLTHENNP=NP-1        :REM*2Ø3
51Ø FL=Ø                   :REM*173
52Ø IFVAL(TI$)<TMTHEN43Ø :REM*8
53Ø :                      :REM*252
54Ø PRINT"{SHFT CLR}{CTRL 9}{CT
   RL 5}{14 SPACEs}FLASH CARDS
   {15 SPACEs}"          :REM*68
55Ø PRINT"{2 CRSR DNs}{CTRL 2}"
   SPC(11)"TIME:"TM/1ØØ"{CRSR
   LF}:ØØ MIN"           :REM*15Ø
56Ø PRINTSPC(5)"# PROBLEMS:{2 S
   PACEs}"NP             :REM*214
57Ø PRINTSPC(5)"{2 CRSR DNs}PLA
   Y AGAIN [Y/N]          :REM*34
58Ø GETK$:IFK$=""THEN58Ø
                          :REM*162
59Ø IFK$="Y"THENRUN       :REM*64
6ØØ SYS2Ø48:END           :REM*156
61Ø :                      :REM*76
62Ø PRINT"{SHFT CLR}{CTRL 9}{CO
   MD 7}{9 SPACEs}FLASH CARDS:
    ADDITION{1Ø SPACEs}{2 CRSR
    DNs}{CTRL 3}"        :REM*194
63Ø FORI=1TO5:PRINTSPC(18)A$(X,
   I):NEXT                :REM*2ØØ
64Ø PRINT:PRINT            :REM*84
65Ø PRINTSPC(18)A$(Y,1):REM*164
66Ø PRINTSPC(18)A$(Y,2):REM*19Ø
67Ø PRINTSPC(13)"{CTRL 9}{CTRL
   2} {CTRL 3}{CTRL Ø}";SPC(4)
   ;A$(Y,3)              :REM*212
68Ø PRINTSPC(12)"{CTRL 9}{CTRL
   2}{3 SPACEs}{CTRL 3}{CTRL Ø
   }";SPC(3);A$(Y,4)    :REM*6Ø
69Ø PRINTSPC(13)"{CTRL 9}{CTRL
   2} {CTRL 3}{CTRL Ø}";SPC(4)
   ;A$(Y,5)              :REM*234
7ØØ PRINT                  :REM*36
71Ø PRINTSPC(12)"{CTRL 9}{CTRL
   2}{11 SPACEs}"        :REM*254
72Ø RETURN                 :REM*12
73Ø :                     :REM*196
74Ø PRINT"{SHFT CLR}{CTRL 9}{CO
   MD 6}{8 SPACEs}FLASH CARDS:
    SUBTRACTION{8 SPACEs}{2 CR
   SR DNs}{CTRL 3}"      :REM*4
75Ø IFL=1THENFORI=1TO5:PRINTSPC
   (18)A$(Z,I):NEXT      :REM*72
76Ø IFL=2THENFORI=1TO5:PRINTSPC
   (11)A$(Z1,I)SPC(2)"{CTRL Ø}
   "A$(Z2,I):NEXT        :REM*188
77Ø PRINT:PRINT           :REM*215
78Ø PRINTSPC(18)A$(Y,1)  :REM*39
79Ø PRINTSPC(18)A$(Y,2)  :REM*65
8ØØ PRINTSPC(18)A$(Y,3)  :REM*91
81Ø PRINTSPC(11)"{CTRL 9}{CTRL
   2}{3 SPACEs}{CTRL 3}{CTRL Ø
   }";SPC(4);A$(Y,4)    :REM*163
82Ø PRINTSPC(18)A$(Y,5):REM*143
83Ø PRINT                  :REM*167
84Ø PRINTSPC(1Ø)"{CTRL 9}{CTRL
   2}{13 SPACEs}"        :REM*27
85Ø RETURN                :REM*143
86Ø :                      :REM*71
87Ø PRINT"{SHFT CLR}{CTRL 9}{CT
   RL 4}{7 SPACEs}FLASH CARDS:
    MULTIPLICATION{6 SPACEs}{2
    CRSR DNs}{CTRL 3}":REM*151
88Ø FORI=1TO5:PRINTSPC(18)A$(X,
   I):NEXT                :REM*195
89Ø PRINT:PRINT            :REM*79
9ØØ PRINTSPC(18)A$(Y,1):REM*159
91Ø PRINTSPC(18)A$(Y,2):REM*185
92Ø PRINTSPC(12)"{CTRL 9}{CTRL
   2} {CRSR RT} {CTRL 3}{CTRL
   Ø}";SPC(3);A$(Y,3)   :REM*15
93Ø PRINTSPC(12)"{CTRL 9}{CTRL
   2}{CRSR RT} {CRSR RT}{CTRL
   3}{CTRL Ø}";SPC(3);A$(Y,4)
                           :REM*251
94Ø PRINTSPC(12)"{CTRL 9}{CTRL
   2} {CRSR RT} {CTRL 3}{CTRL
   Ø}";SPC(3);A$(Y,5)   :REM*43
95Ø PRINT                  :REM*31
```


http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

EASY APPLICATIONS

```
96Ø PRINTSPC(12)"{CTRL 9}{CTRL
    2}{11 SPACEs}"     :REM*249
97Ø RETURN               :REM*7
98Ø :                    :REM*191
99Ø PRINT"{SHFT CLR}{CTRL 9}{CT
    RL 8}{9 SPACEs}FLASH CARDS:
     DIVISION{1Ø SPACEs}{5 CRSR
     DNs}{CTRL 3}"      :REM*19
1ØØØ PRINTSPC(16)"{CTRL 9}{CTRL
     2}{15 SPACEs}"     :REM*221
1Ø1Ø PRINTSPC(16)"{CTRL 9} {CTR
    L 3}"               :REM*155
1Ø2Ø IFL=1THENFORI=1TO5:PRINTSP
    C(9)A$(X,I);"{CTRL 9}{CTRL
     2}{2 CRSR RTs} {2 CRSR RT
    s}{CTRL Ø}{CTRL 3}";A$(Z,I
    ):NEXT              :REM*47
1Ø3Ø IFL=2THENFORI=1TO5:PRINTSP
    C(9)A$(X,I);"{CTRL 9}{CTRL
     2}{2 CRSR RTs} {2 CRSR RT
    s}{CTRL Ø}{CTRL 3}"A$(Z1,I
    )"{CTRL Ø} "A$(Z2,I):NEXT
                        :REM*128
1Ø4Ø PRINTSPC(16)"{CTRL 9}{CTRL
     2} "               :REM*148
1Ø5Ø RETURN              :REM*88
1Ø6Ø :                   :REM*16
1Ø7Ø X=INT(RND(1)*1Ø)    :REM*12Ø
1Ø8Ø Y=INT(RND(1)*(R2-R1))+R1
                        :REM*94
1Ø9Ø Z=X+Y               :REM*12Ø
11ØØ RETURN              :REM*138
111Ø :                   :REM*66
112Ø X=INT(RND(1)*1Ø)    :REM*17Ø
113Ø Y=INT(RND(1)*(R2-R1))+R1
                        :REM*144
114Ø Z=X+Y:Z$=STR$(Z):L=LEN(MID
    $(Z$,2))            :REM*1Ø8
115Ø IFL=2THENZ1=VAL(LEFT$(Z$,2
    )):Z2=VAL(RIGHT$(Z$,1))
                        :REM*23Ø
116Ø RETURN              :REM*198
117Ø :                   :REM*126
118Ø X=INT(RND(1)*1Ø)    :REM*23Ø
119Ø Y=INT(RND(1)*(R2-R1))+R1
                        :REM*2Ø4
12ØØ Z=X*Y               :REM*38
121Ø RETURN              :REM*248
122Ø :                   :REM*176
123Ø X=INT(RND(1)*(R2-R1))+R1:I
    FX=ØTHEN123Ø        :REM*62
124Ø Y=INT(RND(1)*1Ø)    :REM*38
125Ø Z=X*Y:Z$=STR$(Z):L=LEN(MID
    $(Z$,2))            :REM*26
126Ø IFL=2THENZ1=VAL(LEFT$(Z$,2
    )):Z2=VAL(RIGHT$(Z$,1))
                        :REM*84
127Ø RETURN              :REM*52
128Ø :                   :REM*237
129Ø T2=INT(RND(1)*4)+1:REM*253
13ØØ ONT2GOSUB1Ø7Ø,112Ø,118Ø,12
    3Ø                  :REM*189
131Ø RETURN              :REM*93
132Ø :                   :REM*21
133Ø POKES+24,15:POKES+6,24Ø:PO
    KES+4,17            :REM*241
134Ø POKES+1,25:POKES,177
                        :REM*35
135Ø FORT=1TO2Ø:NEXT     :REM*55
136Ø POKES+4,16          :REM*87
137Ø RETURN              :REM*153
138Ø :                   :REM*81
139Ø PRINT"{HOME}{CTRL 2}{21 CR
    SR DNs}"SPC(12)"ANSWER:";
                        :REM*163
14ØØ IFT2=1THENPRINTZ    :REM*53
141Ø IFT2=2THENPRINTX    :REM*123
142Ø IFT2=3THENPRINTZ    :REM*2Ø1
143Ø IFT2=4THENPRINTY    :REM*19
144Ø FL=1:RETURN         :REM*73
145Ø :                   :REM*151
146Ø PRINT"{3 CRSR DNs}DIVISION
     BY ZERO NOT ALLOWED."
                        :REM*141
147Ø PRINT"PLEASE START OVER BY
     PRESSING ANY KEY.":REM*35
148Ø GETK$:IFK$=""THEN148Ø
                        :REM*221
149Ø RUN                 :REM*1
15ØØ :                   :REM*2Ø1
151Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*49
152Ø DATA "{CTRL 9} {3 CRSR RTs
    } "                 :REM*247
153Ø DATA "{CTRL 9} {3 CRSR RTs
    } "                  :REM*1
154Ø DATA "{CTRL 9} {3 CRSR RTs
    } "                 :REM*12
155Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*9Ø
156Ø :                    :REM*6
157Ø DATA "{CTRL 9}{2 CRSR RTs}
    {2 SPACEs}{CRSR RT}"
                        :REM*72
158Ø DATA "{CTRL 9}{2 CRSR RTs}
    {2 SPACEs}{CRSR RT}"
                        :REM*82
159Ø DATA "{CTRL 9}{2 CRSR RTs}
    {2 SPACEs}{CRSR RT}"
                        :REM*92
16ØØ DATA "{CTRL 9}{2 CRSR RTs}
    {2 SPACEs}{CRSR RT}"
                        :REM*1Ø2
161Ø DATA "{CTRL 9}{2 CRSR RTs}
    {2 SPACEs}{CRSR RT}"
                        :REM*112
162Ø :                   :REM*66
163Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*17Ø
164Ø DATA "{CTRL 9}{4 CRSR RTs}
     "                  :REM*16
165Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*19Ø
166Ø DATA "{CTRL 9} {4 CRSR RTs
    }"                  :REM*126
167Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*21Ø
168Ø :                   :REM*126
169Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*23Ø
17ØØ DATA "{CTRL 9}{4 CRSR RTs}
     "                  :REM*76
171Ø DATA "{CTRL 9}{2 CRSR RTs}
    {3 SPACEs}"         :REM*218
172Ø DATA "{CTRL 9}{4 CRSR RTs}
     "                  :REM*96
173Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*14
174Ø :                   :REM*186
175Ø DATA "{CTRL 9} {2 CRSR RTs
    } {CRSR RT}"        :REM*218
176Ø DATA "{CTRL 9} {2 CRSR RTs
    } {CRSR RT}"        :REM*228
177Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*54
178Ø DATA "{CTRL 9}{3 CRSR RTs}
     {CRSR RT}"         :REM*152
179Ø DATA "{CTRL 9}{3 CRSR RTs}
     {CRSR RT}"         :REM*162
18ØØ :                   :REM*247
181Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*95
182Ø DATA "{CTRL 9} {4 CRSR RTs
    }"                  :REM*31
183Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*115
184Ø DATA "{CTRL 9}{4 CRSR RTs}
     "                  :REM*217
185Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*135
186Ø :                   :REM*51
187Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*155
188Ø DATA "{CTRL 9} {4 CRSR RTs
    }"                  :REM*91
189Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*175
19ØØ DATA "{CTRL 9} {3 CRSR RTs
    } "                 :REM*117
191Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*195
192Ø :                   :REM*111
193Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*215
194Ø DATA "{CTRL 9}{3 CRSR RTs}
    {SHFT LB.} "        :REM*2Ø1
195Ø DATA "{CTRL 9}{2 CRSR RTs}
    {SHFT LB.} {CTRL Ø}{SHFT L
    B.}"                :REM*165
196Ø DATA "{CTRL 9}{CRSR RT}{SH
    FT LB.} {CTRL Ø}{SHFT LB.}
     "                  :REM*135
197Ø DATA "{CTRL 9}{CRSR RT}{2
    SPACEs}{2 CRSR RTs}"
                        :REM*151
198Ø :                   :REM*171
199Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*19
2ØØØ DATA "{CTRL 9} {3 CRSR RTs
    } "                 :REM*217
2Ø1Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*39
2Ø2Ø DATA "{CTRL 9} {3 CRSR RTs
    } "                 :REM*237
2Ø3Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*59
2Ø4Ø :                   :REM*231
2Ø5Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*8Ø
2Ø6Ø DATA "{CTRL 9} {3 CRSR RTs
    } "                 :REM*22
2Ø7Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*1ØØ
2Ø8Ø DATA "{CTRL 9}{4 CRSR RTs}
     "                  :REM*2Ø2
2Ø9Ø DATA "{CTRL 9}{5 SPACEs}"
                        :REM*12Ø ■
```


http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

TELECOMPUTING WORKSHOP

Every month, RUN*'s telecommunications column answers questions from our readers who are using, or intend to use, a Commodore computer online.* by DAVID BRADLEY

AS I OFTEN DO, I'll start this month's column with notes on a few miscellaneous topics.

If you're looking for a VIC-1011A RS-232 interface, Ricky Chang from Nu-Tek Computers & Electronics (1635 Kingsway, Vancouver, B.C., Canada V5N 2S2; 604-873-2002) says they still have some in stock. They sell for $59.95 Canadian or $45 U.S., and Nu-Tek will ship anywhere in either country.

I got a letter from Ralph S. Lees, Jr., of Poseidon Electronics concerning Rich Vadagriff's search (in last April's issue) for a Kermit program for his C-128 in 128 mode. The one Ralph's company puts out is not for 128 mode, but CP/M mode. If you have a 128 and a 1571 and want to use Kermit protocol from CP/M, write to Ralph at 103 Waverly Place, New York, NY 10011. His disks cost $16, and all checks must be made payable to him.

It seems that BBSs aren't being operated just by computer-related organizations anymore. Shannon O'Rear from Elizabethtown, Kentucky, reports that the skateboard magazine *Thrasher* is running a BBS in San Francisco, so its readers can talk online about skateboarding and related subjects. The number to call is 415-822-5630.

Now on to this month's questions.

Q *I became interested in Q-Link, so I purchased a modem and the Q-Link software. The modem is a Volks 6480 (300/1200 baud) from Anchor Automation. After reading the software instructions and making several unsuccessful attempts to connect, I finally called the Q-Link customer service number. They told me their software won't work with my modem and I have to get software from Anchor Automation. Why does the Q-Link software work with many other modems but not the 6480, and why doesn't Q-Link warn people about this incompatibility?*

—FRANK MCGRAW
OTTAWA, IL

A I don't think Q-Link should take the blame for this situation. Their software supports a lot of modems (its modem menu offers 17 options), but the Volks 6480 is too different to be included. Anchor Automation has picked up the slack and is now packaging the needed software with the 6480. From what I've been told, they're also including the Q-Link program on the flip side of their disk. I guess you got one of the earlier 6480s, before Anchor started bundling the software.

Q *I want to get a good modem at a reasonable price, but I don't know much about modems. Could you suggest one? Also, should I get 300 or 1200 baud?*

—DANNY MEYERS
SAINT CLAIR, MI

A If you want a good, inexpensive modem, get the Commodore 1600 (see below). It doesn't sing and dance like some more expensive modems, but it will get you online with very little investment.

If you can afford to get a 1200-baud modem, I'd say do so. It'll save you a lot of online time, and time is money. The Commodore 1670 (also see above) supports both 300 and 1200 baud.

Q *I recently bought a Volks 6480 modem, and now I've discovered that there aren't many companies supporting it. Are there any terminal or BBS programs available for this modem besides the software it came with? If not, is there any way I can make other programs work with it?*

—KIM CUMBERLAND
ROCHESTER, NY

A As I mention fairly often in this column, if you're in the market for a modem, it's best to stick to one that works like a Commodore 1650 or a Hayes. Those two have become the standards in the Commodore world and most Commodore telecommunications software supports them.

I do know of one terminal program for the Volks 6480—a public domain program, written by Guill Grace, called Volks Term 6480. It supports the Xmodem and Punter protocols, has a graphic terminal mode, as well as a normal terminal mode, and supports 300, 450 and 1200 baud.

You can find it on Richard Bradley's BBS, 416-492-2300, or you can get it through the mail for $5, plus $1 postage and handling, from Public Domain Solutions, PO Box 832, Tallevast, FL 34270.

If you have any other terminal or BBS programs that are in Basic or in a form you can edit, you should be able to alter them to support the Volks 6480. I don't have one of these modems, so I can't tell you anything about how they work, but considering the number of questions I've been receiving about them, I may get one.

Q *I want to use a 1200-baud modem with my C-128 and QuantumLink terminal program. What are the differences between the Commodore 1600, 1650, 1660 and 1670 modems, and will one of them suit my purpose?*

—MIKE DALESSIO
FREDERICK, MD

A The Commodore 1600 is a non-dialing 300-baud modem, the 1650 and 1660 are autodial/autoanswer 300-baud modems and the 1670 is an autodial/autoanswer 300/1200-baud modem. All of them will work with the VIC-20, the C-64 and the C-128. The 1670 will also work with the Plus/4.

The 1660 and the 1670 both have speakers in them, so you can hear what's happening on your phone line when you call out. This feature is especially helpful if you dial a voice number instead of a BBS; you'll hear quickly if something isn't right.

The 1670 supports dialing, as well as other commands sent to the modem from the terminal mode of *any* terminal program. To make the 1650 or the 1660 dial, you must have a terminal program that works with that modem specifically.

The 1650 and the 1670 are well supported by commercial and public domain programs and are pretty much

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

the standard for Commodore users. If you're looking for 1200 baud, the one for you is the 1670.

Q *I'm running a BBS on a C-64, two 1541 disk drives and an Okimate 10 printer. I recently read* RUN*'s article on hard drives in the April 1987 issue and was wondering if I could use a hard drive with the C-Net V10.0 or V11 BBS software.*

—RICHARD WILLS
SOCORRO, NM

A I'm not familiar with the software you mention, but I am quite sure you could operate it on a hard drive. I'm currently experimenting with the Xetec Lt. Kernal on my BBS, and it's *very* impressive! Before going out and taking the hard-drive plunge, I'd suggest you talk to the manufacturer of the unit you're interested in to make sure your program will work with it. However, unless your BBS program does things in a 1541-specific way, I can't imagine you'd have any trouble.

Q *Could you tell me how to get* Toronto Computes!? *I understand it's a free monthly newspaper produced in that city.*

—PHILIP GOLDMAN
KETTERING, OH

A *Toronto Computes!*, which features BBS number listings for Toronto every month, offers U.S. subscriptions, but for $17 per year or $29 for two years. For more information, write to *Toronto Computes!*, Attention Eric and David, 3092 Danforth Ave., Suite D, Toronto, Ontario, Canada M1L 1B1.

Q *I'm a C-64 owner and interested in starting a BBS. However, I've heard via the grapevine that there's a snafu in the works concerning BBSs running on a C-64 and 1541 disk drive.*

The problem, as reported, is that if a caller to the BBS hangs up at just the wrong moment during a disk access, the system will hang up with the disk motor still running. The disk access won't terminate, and the modem won't reset to answer the next call. If the operator fails to notice what's happened, the drive motor might be permanently damaged, or even burn out (depending on the condition of the drive, the ventilation around it and its age).

This problem, so the story goes, results from the interaction between Basic and the operating system built into the drive. Therefore, unless you know that a program is specifically designed to avoid the problem, you should consider it unsafe.

Have you or any other Telecomputing Workshop readers heard of this problem? If so, do you know of any safe software or any other techniques I might use to protect my system?

—DENNIS MCNELIS
FORT WAYNE, IN

A I've put my ear to every grapevine I could find, but nowhere did I hear any talk about what you've described, and I've never heard of it elsewhere in more than five years of running Commodore BBSs.

If anyone else has any information about this potentially serious problem, please let me know, so I can pass the word along.

Q *You mentioned the Thirdterm terminal program in your September 1986 column and, lo and behold, I found it on a local BBS. However, it doesn't seem to work with my Commodore 1660. Is there any way I can make this program work with that modem?*

—LEO DIAMOND
NEW YORK, NY

A Thirdterm evolved from Higgyterm, a program written by Paul Higginbottom and David Berezowski of Commodore Business Machines, now of Digital Solutions. Higgyterm can't upload and download, but it does support the 1660. There are versions of Higgyterm for the C-64 and the Plus/4, and you can get both on the TPUG section of Q-Link or through the mail from Public Domain Solutions, PO Box 832, Tallevast, FL 34270, for $5, plus $1 shipping and handling.

I've seen other versions of Higgyterm that do up- and download. Unfortunately, they work with the Mitey Mo and HesModem II, but not with the 1660. If I hear of a version of Thirdterm that supports your modem, I'll let you know.

Q *Every once in a while I have problems with prank phone calls. I own a Commodore model 1660 modem, and I'm wondering if I can trace the calls with it.*

—GEORGE ROEDL
GOSHEN, AL

A You can't trace phone calls with any modem that I know of. Where I presently live, the only way to trace calls is to keep a log of when they occur and give it to the telephone company. Then they can find out where the calls are coming from.

There is a new phone system being tested that will tell you the number a call is coming from *before* you answer. It will also lock out numbers by giving them a busy signal. These features may be available from your local telephone company in a couple of years.

TELECOMPUTING TIP OF THE MONTH

This month's tip may sound like common sense, but it's *very* important and people forget about it. It is, be sure to turn your computer off before you connect or disconnect your modem. I don't mean your phone line; I mean the actual modem. Many people get away with not turning the computer off, but it's possible to ruin the modem, the computer or both. ■

We invite you to submit your telecommunications questions or comments to:

David Bradley
Telecomputing Workshop
c/o RUN Magazine
80 Elm St.
Peterborough, NH 03458

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

RESOURCE CENTER

With nothing more than a word processor and some art supplies, you and your child can create a storybook together. The project will be educational for your child, and you'll both have fun. by MARGARET MORABITO

One of the best ways to teach your children how to write is to encourage them to create their own stories. For young children especially, writing stories, illustrating them, then reading what they've written and sharing it with others promotes creative expression.

As with many other learning activities, your home computer can play an important role in this kind of project. There are commercial programs available that direct students through writing and editing exercises. Some of these programs culminate in printed storybooks that are laid out like real books and illustrated with stickers or computer graphics.

However, you don't need a special writing program to help your child create illustrated stories. Similar results can be accomplished with a word processor, such as RUN Script, and some guidance from you. You and your child can design imaginative page layouts and type in the text with the word processor, and then your child can add the illustrations. Using the procedures outlined below, together you can create illustrated stories, poems, letters, photo albums and school reports.

WRITING AND EDITING

Let's say your child wants to produce a short story. The first job is the writing; then you'll work on page layout, printing and illustration.

The writing involves several steps: brainstorming for ideas, organizing the ideas, writing the first draft, and then proofreading, editing and rewriting. In this kind of limited project, planning can be done without your computer, although you may want to use a thought processing program if you have one. [See "Outlining Your Thoughts" in this issue for more on thought processors.] Your word processor comes into play for actually writing, revising and printing the story.

While some children will have plenty of story ideas, others will find planning the story the most difficult part of the project and will need help from you. You could suggest writing a story about him- or herself, family, friends or heroes, or perhaps rewriting a favorite television show, movie or fable. Maybe your child already has a story that was written at school.

For the first draft, some children prefer to write with pencil and paper; others like to start right off with the word processor. Either way, after the story has been typed into the computer, save it to disk and print it out in double-spaced form. The printout will provide an immediate reward for the child's effort and make the story easy to read and edit.

You both can proofread the printout and make revisions to the story on the paper. In the process, point out and correct errors in spelling and sentence structure insofar as the child can understand them.

When you've finished going over the story, have your child type the corrections into the computerized document, using the word processor. This process will produce a great sense of accomplishment; even deleting a single letter provides a sense of control not available with pencil and paper. Be sure to save the changes to disk and use the revised version for the final printout.

PAGE LAYOUT

Now you can get to work on the next job: page layout. With your help, the sentences can be artfully arranged on the printout for placement of illustrations in varied positions. Some pages will have a blank space at the bottom for an illustration; some will have a blank area off to the right or left side; some will have one at the top.

I usually leave plenty of room for illustrations—about half the page. This space will be needed if the pictures are to be drawn freehand, and younger children are likely to write tiny stories, so large pictures will help fill out the pages.

Use the formatting commands of your word processor to control the page layout. You needn't burden your child with entering these commands; this task is best done by you. Some of the commands must appear at the beginning of the document, and some have to go within the text. Experiment on the screen with a few formatting commands to see what results they produce.

I use the screen-print option in RUN Script to preview page layouts. To activate this option, press F1, then P for print, N for noncontinuous output and S for screen.

When you format the story, you'll probably want to leave the top half of the first page blank for a lead-off picture, as in illustrated books and magazines. You'll also probably want to include the title of the story and the page number as a header on each page.

In Table 1 you'll find a sample sequence of commands for formatting a child's story. The first command produces the header on each page. The two commands on the second line print three blank lines between the title and the text on each page and designate double spacing for the entire document.

The command on the third line inserts 20 blank lines above the text on page 1. It's followed by ten lines of text and a force-page command to end printing on page 1. You'll need a force-page command anywhere you want a page-break to occur. For the first printout, you'll have to estimate where the force-page commands should go. I usually place one at the end of a paragraph, with one or two paragraphs per page.

After the force-page command that ends page 1, there comes a series of commands that control the layout of page 2. They produce a small left margin and a large right margin, compressing the text into a 30-character-wide left column and leaving room for an illustration on the right.

After the force-page command ending page 2, another line of margin commands sets up page 3 with a right column of text and a picture on the left.

The fourth page will have room for a picture across the bottom. Its formatting commands reset the margins for a full line length and limit the text on the top half of the page to ten screen lines.

These sample commands should get you started on some interesting page

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

TABLE 1. Sample page-formatting commands.

Format for page spacing:
.hd Title
.hs3.ls1

Page 1 format:
.el20
(Insert ten screen lines of text.)

Force-page:
.fp

Page 2 format:
.lm5.rm45
(Continue text for about five or six more screen lines.)

Force-page:
.fp

Page 3 format:
.lm30.rm5
(Continue text for five or six screen lines.)

Force-page:
.fp

Page 4 format:
.lm5.rm5
(Continue text for ten screen lines.)

Force-page:
.fp

layouts. You can experiment with line spacing, margin widths and page widths to create your own text arrangements. Print out some samples, and let your child choose which layout he or she wants for each page. Most commercial word processors include similar formatting features, so you can easily apply the principles illustrated here to your own program.

Illustrations

Writing and page layout are just part of the fun of creating a storybook with a word processor. After the story has been reprinted according to your layout, it's time for the illustrations. These can be done in several ways. Your child could draw pictures on the printed pages and color them in, or perhaps decorate the pages with colorful stickers, available inexpensively at most variety stores. He or she could also cut pictures out of magazines and glue them onto the printed pages, and you might even donate some family photographs to the cause.

Of course, the computer can produce illustrations, too, but this wouldn't be as easy for your child. If you want to use the computer, a graphics program would help. After the graphics have been created, run each page of text back through the printer to add the graphics in the reserved blank spaces. Then your child can color the pictures in.

When they are all illustrated, you might paste the pages of the story onto cardboard or construction paper and place them in a colorful binder, perhaps with plastic page protectors. You could also photocopy the pages to make several books. Use your imagination, and you'll end up with storybooks that your child will be proud to show to friends, relatives and teachers.

More Ideas?

While a word processor can't take the place of a well-designed commercial writing program, it's perfectly adequate for enhancing a young child's writing and reading skills. You'll also find that story writing fosters a desire to do more creative activities and that your child's school work will improve from using a word processor at home. If you invent other interesting projects to do with your word processor, let me know what you come up with. ■

If you're using Commodore computers for educational purposes (at home or in school) and would like to share your experiences through the Resource Center, write me a letter detailing the equipment you're using, subject areas you teach, grade level or age of your students, software you're using and any other information you feel like including.

Also, if you'd like to donate public domain education programs to the Resource Center for sharing with other educators or parents, please send along a disk with a brief description of the program. Send correspondence and disks to:

Margaret Morabito
Resource Center
c/o RUN Magazine
80 Elm St.
Peterborough, NH 03458

You can also leave mail in my on-line mail boxes: CompuServe (70616,714) or QuantumLink (MARGM).

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

COMMODORE CLINIC

This month, we'll tell you how to speed up your disk drive's performance, warn you about a particular type of terminal program you should avoid and offer insights and solutions to your most perplexing computing problems. by JIM STRASMA

HARDWARE

Q *Will the graphics interfaces I've seen advertised for Commodore computers let my non-graphics printer print graphics characters?*

—VINNIE ZAK
SHELTON, CT

A No, normally they won't. Graphics interfaces are designed to convert the Commodore graphics commands for Commodore graphics printers into equivalent commands for other graphics printers. Such interfaces became necessary when Commodore chose not to support Centronics parallel printers or Epson graphics and not to offer its own high-quality graphics printer.

Q *I have a Commodore C-128D, which has all the capabilities of the C-128 plus a detached keyboard and a built-in disk drive. Why don't I see it advertised in magazines like* RUN? *Is it unavailable in the U.S.?*

—W. JOHANNES
YOGYAKARTA, INDONESIA

A That's correct. Although the C-128D was unveiled over two years ago at the Consumer Electronics Show in Chicago, Commodore has thus far chosen not to sell it here.

Historically—and surprisingly—the U.S. market hasn't been all that important in Commodore's planning. This is at least the fourth time Commodore has sold a computer model nearly everywhere except in the U.S. Presumably there is less competition and more profit potential elsewhere.

Q *I'm considering souping up my 1541 with a more powerful electric motor to make up for the drive's slow speed. However, I'm afraid this might render my disks useless or even refuse to load or save programs. Any advice?*

—LEONARD ARNOLD
GLADSTONE, VA

A Actually, it isn't the motor in the 1541 that makes it run so slowly. The real slowpoke is the bit-serial interface method Commodore chose to use with the drive and computer in order to cut costs. So, even if you could increase the rotation speed of your floppy disks, you probably wouldn't notice any improvement in data transfer speed.

If you want to speed up your disk drive's performance, get a program that speeds data transfers, such as the Mach 5 from Access Software.

SOFTWARE

Q *A program I wrote is about 8K long and loads in less than three seconds. However, data from one of my Swiftcalc 128 spreadsheets takes six minutes to save. Why is there such a drastic difference in speed?*

—BRIAN HARDING
CARROLLTON, TX

A Several factors make loading a program much quicker than saving spreadsheet data. First, when you load a program, there's no question about where the information will go or where the next sector in the program is located. The first two bytes of the program are its load address, and each sector includes all the information needed to find the next sector in the program.

A save, on the other hand, first needs to find space for each new sector of data in turn, without any quick way for the disk drive to know in advance how many sectors will be needed in all. Also, it has to link all the sectors together so they can be read or loaded later.

Second, you load a program, as a single operation, into a block of contiguous memory. However, when you save data, it's written from a much smaller buffer area, which means only a small part of the total file can be written at a time.

Third, if the computer has to change any string variables, it may require occasional time-outs to get rid of unneeded strings created by the file-save operation. There'll be short periods when the computer seems to go dead, then resumes as though nothing had happened.

Finally, your spreadsheets may be much larger than 8K. One spreadsheet I use allocates as data every cell to the left of or above any cell in which I have written anything, even if I erase the cell. This can dramatically increase the space taken up by a spreadsheet.

If the time delay matters a lot to you, try another spreadsheet. I can't ever recall having to wait more than a minute or so for a spreadsheet to save its data.

Q *Is there a terminal program for the C-64 that dials numbers having a specific prefix and saves the ones that answer with a computer tone?*

—JEREMY MAPPUS
AUSTIN, TX

A Programs that do what you ask do exist. One was even featured in the movie *WarGames*, where it got its user into deep trouble. Morally and legally, however, there is almost no defense for their use, and it might even be illegal for me to help you find one.

Just because a computer answers the phone doesn't give you the right to access it. Laws regarding this are getting more strict, and properly so. If you insist on getting into a computer uninvited, limit your explorations to trying the programs Hacker and Hacker II from Activision. That way, your next letter to the Clinic won't have to be mailed from the clink.

Q *Where can I get a replacement disk for The Manager database?*

—KAREN LANDRETH
FLORENCE, SC

A Packed with your original program disk and manual is a card telling you how to get a replacement

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

disk directly from Commodore. Send the original disk to Customer Support at Commodore Business Machines (1200 Wilson Drive, West Chester, PA 19380), with a check for $5.

Q *I've called nearly every dealer in northeast Ohio for a copy of the* Programmer's Reference Guide for the Commodore Plus/4. *Where can I buy a copy? Also, does Commodore or any dealer carry software for the Plus/4?*

—KEITH SCHRODE
SALEM, OH

A According to the information I received from Calvin Demmon, president of the Plus/4 Users Group (PO Box 1001, Monterey, CA 93942), the reference guide is published by Scott Foresman Professional Publishing Group (1900 East Lake Ave., Glenview, IL 60025) and retails for $22. Any bookstore should be able to order it for you. You'll also be happy to know that you may order 50 or so programs for the Plus/4 directly from Commodore, and PLUG offers some public domain programs itself. Membership in PLUG is $20 a year, and it's probably a good investment for any Plus/4 owner.

PROGRAMMING

Q *What do the terms text file and binary file mean, and what is put on the disk for each?*

—TED CHIDESTER
SANTA FE, NM

A An easy way to distinguish between text and binary files is that text files are made up of printable characters that people can read, whereas binary files are made up of binary codes that only computers can easily read.

The distinction is obvious in CP/M mode on the C-128, and under MS-DOS on the PC-10 and PC-20, all of which have a type command to list the contents of a disk file. If it's a text file that ends with extensions such as .TXT, .ASM or .SRC, you'll be able to read its contents as it scrolls across your screen. On the other hand, if you try to type in a binary file, such as a machine language program, you'll get only what appears to be garbage on the screen.

To a purist, a text file should be made up only of letters, numbers, punctuation and special symbols, and not include any control codes or graphics. A binary file, however, may include any character. If it's also a program file, its first two characters will also be the absolute address in memory into which the program should be loaded to run properly.

Q *I need a program that turns machine language programs into Basic so that I can debug them, and then reassembles the modified version. If this isn't possible, then how can I list machine language?*

—LEONARD ARNOLD
GLADSTONE, VA

A The only products that do this are some uncompilers that take a compiled Basic program and convert it back into an equivalent Basic source code. But, such programs work only if the compiled program is in Basic, and compiled by one specific compiler.

Apart from that, the only way to do it is with an unassembler, or symbolic disassembler. I developed one several years ago that's probably still in some user group libraries, but the best I've seen is Symbol Master by Schnedler Systems, 1501 N. Ivanhoe, Arlington VA 22205; phone 703-237-4796.

Q *In some of my programs, I poke screen display codes into locations 1024–2023 of my C-64. This should print the character to the screen location I choose, but I can see the characters only when the cursor is flashing at the same location. How can I solve this problem?*

—JOSHUA CARON
QUIMBY, ME

A When you poke a character into screen memory, you also need to poke a code for the color you want the character to be in color memory. Otherwise, its default color will be the same as the background color, making it invisible until the background color changes by either a flashing cursor or an additional Poke. Color memory on the C-64 begins at location 55296 and has one location for the color of each screen location, stored in the same order as character positions in the screen memory beginning at location 1024. You may poke any number in the range 0–15 into each color memory location, with each number representing one of the 16 available colors.

REPAIR

Q *Is there a way to remove keys from a keyboard without ruining them? I want to swap some of the keytops on a C-16 keyboard (bought from Radio Shack for $5) that are incorrectly located for the C-64.*

—JERRY VAN VACTOR
SPEARFISH, SD

A Simply fashion a small hook from a paper clip, slip it into the gap between the keys, then into the recess underneath the keytop you want to remove, and gently pull up on the hook. The keytop should easily slip off its post. Then recap the post by gently pressing the C-16 keytop back onto it so that the slot in the keytop mates with the post. ■

Do you have a problem or question about your Commodore computer? Commodore Clinic can help. Just send your question on a postcard to:

Jim Strasma
Commodore Clinic
PO Box 6100
Macomb, IL 61455-6100

Queries are answered only through this column, and, due to the volume of mail, only questions that appeal to the majority of our readers can be published.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

How To Type *RUN* Listings

To simplify typing *RUN*'s program listings, we include checksum numbers. These follow a REM statement at the end of each line (e.g., :REM*123) and necessitate your using *RUN*'s Perfect Typist programs, listed below.

Type in 64 Perfect Typist (Listing 1) for 64 programs, or 128 Perfect Typist (Listing 2) for 128-mode programs, and save it before running. When you want to type in a 64- or a 128-mode program, first load and run the appropriate Perfect Typist listing. Two SYS numbers appear on your screen. Jot them down, since you'll need them for deactivating and reactivating the checksum program.

If, when you run a Perfect Typist program, you get an "Out of Data error in line 30" in 64 Perfect Typist (or "in line 10" in the 128 version), it means you made an error in entering the data statements. Carefully compare what you typed with the data statements in the magazine. Correct any discrepancies, then re-save the corrected Perfect Typist program, and it should work well. (The reference to line 30—or 10—is irrelevant; that's not where the error is.)

After Perfect Typist has been loaded and run, start typing in the program listing from *RUN*. After you press the return key to log in each line, the checksum number, ranging from 0 to 255, appears below the line at the left margin.

If this matches the checksum printed in the listing after the :REM*, you have typed that line correctly. You then type the next line right over the previous line's checksum value. If the numbers do *not* agree, analyze the line on screen for errors. Make the needed changes and press return again to log them in. Compare the new checksum that appears with the magazine's number and then proceed.

When finished entering your program, disable the Perfect Typist by typing the appropriate SYS number and pressing return. Now you can save your program as usual, but before attempting to run it, turn the computer off and back on to completely clear out the Perfect Typist program.

You may save an incomplete program and continue it later. To do so, reload and run Perfect Typist, then load your program, list it, and go on from where you left off.

The 128 Perfect Typist works in either 40 or 80 columns and lets you use automatic line-numbering. If Auto is on, the checksum is printed below the line you just entered, and the next line number appears below the checksum.

All listings in *RUN* have been translated so the graphics and control characters become understandable key combinations. Follow instructions inside curly brackets. (What you see on screen looks quite different from what's inside the brackets.) For example, {SHIFT L} means hold down the shift key and press the L key. Another example is {22 SPACEs}, which instructs you to press the space bar 22 times. Ⓡ

Listing 1. *64 Perfect Typist program.*

```
1 REM 64 PERFECT TYPIST
2 REM BY: JAMES E BORDEN
1Ø POKE56,PEEK(56)-1:POKE52,PEEK(56):CLR
2Ø PG=PEEK(56):ML=PG*256+6Ø
3Ø FORX=ML TO ML+154:READD:T=T+D:POKEX,D:N
   EXT
4Ø IFT<>16251 THEN PRINT"ERROR IN DATA..."
   :END
6Ø POKEML+4,PG:POKEML+1Ø,PG:POKE ML+16,PG
7Ø POKE ML+2Ø,PG:POKE ML+32,PG:POKE ML+38,
   PG
8Ø POKE ML+141,PG
89 PRINT"{SHFT CLR}{CRSR RT}**************
   ************************"
9Ø SYS ML:PRINT "{CRSR RT}** 64 PERFECT TY
   PIST IS NOW ACTIVE{2 SPACEs}**"
1ØØ PRINT "{CRSR RT}** SYS"ML"=ON{5 SPACEs
    }SYS"ML+3Ø"=OFF **"
1Ø1 PRINT"{CRSR RT}**********************
    ***************":NEW
11Ø DATA 173,ØØ5,ØØ3,2Ø1,ØØ3,2Ø8,ØØ1,Ø96
12Ø DATA 141,1Ø5,ØØ3,173,ØØ4,ØØ3,141,1Ø4
13Ø DATA ØØ3,162,1Ø3,16Ø,ØØ3,142,ØØ4,ØØ3
14Ø DATA 14Ø,ØØ5,ØØ3,Ø96,234,234,173,1Ø4
15Ø DATA ØØ3,141,ØØ4,ØØ3,173,1Ø5,ØØ3,141
16Ø DATA ØØ5,ØØ3,Ø96,Ø32,124,165,132,Ø11
17Ø DATA 162,ØØØ,142,24Ø,ØØ3,142,241,ØØ3
18Ø DATA 189,ØØØ,ØØ2,24Ø,Ø51,2Ø1,Ø32,2Ø8
19Ø DATA ØØ4,164,212,24Ø,Ø4Ø,2Ø1,Ø34,2Ø8
2ØØ DATA ØØ8,Ø72,165,212,Ø73,ØØ1,133,212
21Ø DATA 1Ø4,Ø72,238,241,ØØ3,173,241,ØØ3
22Ø DATA Ø41,ØØ7,168,1Ø4,Ø24,Ø72,Ø24,1Ø4
23Ø DATA Ø16,ØØ1,Ø56,Ø42,136,Ø16,246,1Ø9
24Ø DATA 24Ø,ØØ3,141,24Ø,ØØ3,232,2Ø8,2ØØ
25Ø DATA 173,24Ø,ØØ3,Ø24,1Ø1,Ø2Ø,Ø24,1Ø1
26Ø DATA Ø21,141,24Ø,ØØ3,169,Ø42,Ø32,21Ø
27Ø DATA 255,169,ØØØ,174,24Ø,ØØ3,Ø32,2Ø5
28Ø DATA 189,162,ØØ3,189,211,ØØ3,Ø32,21Ø
29Ø DATA 255,2Ø2,Ø16,247,164,Ø11,Ø96,145
3ØØ DATA Ø13,Ø32,Ø32
```

Listing 2. *128 Perfect Typist program.*

```
1 REM 4Ø/8Ø COL C128 PERFECT TYPIST
2 REM BY: JAMES E BORDEN
1Ø FORX=512ØTO5379:READD:T=T+D:POKEX,D
2Ø NEXT:IFT<>28312 THENPRINT"{2 CRSR DNs}E
   RROR IN DATA...":END
25 A$="":IFPEEK(215) THENA$="{2Ø SPACEs}"
3Ø PRINT"{SHFT CLR}"A$" ****************
   ********************"
4Ø PRINTA$" ** 128 PERFECT TYPIST IS NOW A
   CTIVE **"
5Ø PRINTA$" **{2 SPACEs}SYS 512Ø=ON{7 SPAC
   Es}SYS 515Ø=OFF{2 SPACEs}**"
6Ø PRINTA$" ****************************
   ********":SYS512Ø:NEW
7Ø DATA 173,5,3,2Ø1,2Ø,2Ø8,1,96,141,45,2Ø,
   173,4,3,141,44,2Ø,162,43,16Ø,2Ø
8Ø DATA 142,4,3,14Ø,5,3,96,234,234,173,44,
   2Ø,141,4,3,173,45,2Ø,141,5,3,96
9Ø DATA 32,13,67,14Ø,255,19,162,Ø,142,252,
   19,142,253,19,142,254,19,189,Ø,2
1ØØ DATA 2Ø1,32,24Ø,8,2Ø1,48,144,7,2Ø1,58,
   176,3,232,2Ø8,238,189,Ø,2,24Ø,54
11Ø DATA 2Ø1,32,2Ø8,5,172,254,19,24Ø,42,2Ø
   1,34,2Ø8,1Ø,72,173,254,19,73,1
12Ø DATA 141,254,19,1Ø4,72,238,253,19,173,
   253,19,41,7,168,1Ø4,24,72,24,1Ø4
13Ø DATA 16,1,56,42,136,16,246,1Ø9,252,19,
   141,252,19,232,2Ø8,197,173,252
14Ø DATA 19,24,1Ø1,22,24,1Ø1,23,141,252,19
   ,169,42,32,241,2Ø,32,188,2Ø,16Ø
15Ø DATA 2,185,185,2Ø,32,241,2Ø,136,16,247
   ,165,116,2Ø8,9,165,117,2Ø8,5,169
16Ø DATA 145,32,241,2Ø,172,255,19,96,13,32
   ,32,162,Ø,173,252,19,232,56,233
17Ø DATA 1ØØ,176,25Ø,1Ø5,1ØØ,2Ø2,24Ø,3,32,
   232,2Ø,2Ø1,1Ø,176,5,2Ø5,252,19
18Ø DATA 24Ø,15,162,Ø,232,56,233,1Ø,16,25Ø
   ,24,1Ø5,1Ø,2Ø2,32,232,2Ø,17Ø,72
19Ø DATA 138,9,48,32,241,2Ø,1Ø4,96,17Ø,173
   ,Ø,255,72,169,Ø,141,Ø,255,138,32
2ØØ DATA 21Ø,255,1Ø4,141,Ø,255,96
```

■

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

From p. 14.

```
13Ø IFJOY(2)=128THEN GSHAPE B$,TX,TY
14Ø GETA$:IFA$=CHR$(32)THENGRAPHICØ:GOTO6Ø
15Ø MOVSPR SN,TX+24,TY+5Ø:GOTO9Ø
```

—MATTHEW THIE, INDIANAPOLIS, IN

$3FF PERMANENT SCREEN MAPPER

I'd like to share an improvement I made to the Screen Mapper trick ($3A8) in the February 1987 Magic. I glue a screen map produced by the Screen Mapper program to a stiff sheet of cardboard and cover it with a clear plastic cover. I use a grease pencil for drawing, and wipe off the plastic with a damp cloth when I'm finished.

—DALE PIZZO, ROXBOROUGH, PA

$400 C-64 TURBO-CURSOR

These Poke commands will make the cursor move much faster around the screen, which is helpful in programs requiring frequent cursor use. Just enter this line:

```
POKE 650,128:POKE 56325,10
```

Poking location 650 with 128 enables all the keys to repeat. You can change the cursor's speed by poking different values into location 56325 (lower numbers give faster speeds). (Can any reader create a program that enables the cursor to move diagonally in all directions?)

—M. PELLEGRINO, SPENCER, MA

$401 C-64 FADE-IN/FADE-OUT TEXT

I use the technique of "fading" in my screen titles to give my presentations a professional look. The subroutine I use (lines 1000–1080) shows how to employ the technique. I put my title or message in variable A$, the location numbers of the screen lines I want my message to appear on in variable A, and then call up the subroutine. If you want to produce a fade-out effect, just add REM in front of DATA in line 1060. (See if you can figure out why the fade-out effect works.)

```
1Ø REM MAGIC FADING BY DON JONES
2Ø PRINT"{SHFT CLR}":POKE53281,Ø
3Ø A$="{17 SPACEs}FADING":A=2:GOSUB1ØØØ
4Ø A$="{19 SPACEs}IS":A=3:GOSUB1ØØØ
5Ø A$="{17 SPACEs}MAGIC!":A=4:GOSUB1ØØØ
6Ø A$="{14 SPACEs}BY DON JONES":A=6:GOSUB1
   ØØØ
7Ø PRINT"{CTRL 2}":END
1ØØØ REM *FADE-IN ROUTINE*
1Ø1Ø FOR L=1TO5
1Ø2Ø PRINT"{HOME}{CRSR UP}";:FORPD=1TOA:PR
     INT"{CRSR DN}";:NEXTPD
1Ø3Ø READC,D:POKE646,C:PRINTA$;
1Ø4Ø FORW=ØTOD:NEXT
1Ø5Ø NEXTL:PRINT:RESTORE:RETURN
1Ø6Ø DATA Ø,15,11,15,12,15,15,15,1,3ØØ
1Ø7Ø REM FADE OUT DATA
1Ø8Ø DATA 1,15,15,15,12,15,11,15,Ø,3ØØ
```

—DON JONES, VIRGINIA BEACH, VA

$402 C-64 TWINKLE, TWINKLE, LITTLE STARS

The short routine below fills the screen with twinkling stars. I first designed it as a backdrop for a space game and later found it useful as a visual distraction for users during a program's short waiting periods. (Can anyone put shooting stars in this program?)

```
1Ø REM TWINKLING STARS-MARCE BALAGUER
2Ø PRINT"{SHFT CLR}":DEF FNS(A)=INT(RND(Ø)
   *1ØØØ)
3Ø S=1Ø24:D=54272:C=S+D
4Ø FORX=1TO5Ø:F=FNS(X)
5Ø FORY=1TO2:FORR=1TO4:READA,B
6Ø POKES+F,A:POKEC+F,B
7Ø NEXT:RESTORE:NEXT:NEXT
8Ø DATA 86,1,91,5,42,7,46,1
```

—MARCO BALAGUER, BROOKLYN, NY

$403 BACH IS BACK

This program plays a short song written by Johann Sebastian Bach. Just type in the program, run it and enjoy.

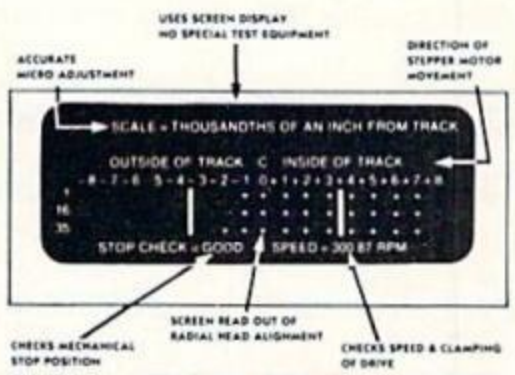
```
1Ø REM HARPSICHORD PLAYER-JESSE BROWN
2Ø TEMPO 17:FILTER 15ØØ,1,Ø,Ø,15
3Ø A$="V1O4T6X1HA V2O3T5X1QDQAQD V1O4IG#IF
    V2O3QA V1O4IEIDM V1O4HA V2O3QDQAQD V1O
   4IG#IF V2O3QA V1O4IEIDM V2O3WD V1O4#IFI
   GQA#QFM"
4Ø AA$="V2O3HA V1O4QE V2O3HD V1O4#QFQDM"
5Ø AB$="V2O3HA V1O4QEQAHD V2O3HDM"
```

►

"I Saved Time & Money with Physical Exam"

I use a data base to keep records for our club. Last week I experienced read errors. Luckily I have a 1541 Physical Exam program. The alignment test confirmed what I had suspected, my drive was out of alignment. I am happy to report that I aligned my drive MYSELF. I avoided the wait for repair and paid a fraction of the cost.

1541 Physical Exam Sample Screen


USES SCREEN DISPLAY
NO SPECIAL TEST EQUIPMENT
ACCURATE MICRO ADJUSTMENT
DIRECTION OF STEPPER MOTOR MOVEMENT
SCALE = THOUSANDTHS OF AN INCH FROM TRACK
OUTSIDE OF TRACK
INSIDE OF TRACK
STOP CHECK = GOOD
SPEED = 300 87 RPM
CHECKS MECHANICAL STOP POSITION
SCREEN READ OUT OF RADIAL HEAD ALIGNMENT
CHECKS SPEED & CLAMPING OF DRIVE

Package includes: • True digital alignment disk with offset tracks. • Mechanical Stop Test • Speed Test • Illustrated manual with instructions for performing alignment, adjusting speed and stop position. • Hard copy mode to print test results for future reference.

$39.95 + S & H per program **Please specify drive**
1541, 1571, 8050, 8250, 4040, SFD 1001

Order Toll Free 10-6 MON-SAT **800-762-5645**

Cardinal Software
14840 Build America Dr.
Woodbridge, VA 22191
Info: (703) 491-6494

Circle 192 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

MAGIC

```
6Ø C$="V2O3WA V1O4IE#IFQGIE#IFQGM V2O3WD V
   1O4#QFQAHAM V2O3WA V1O4IE#IFQGIE#IFQGM
   V2O3WD V1O4#QFQDHDM"
7Ø PLAY A$:PLAY AA$:PLAY A$:PLAY AB$:PLAY
   C$:PLAY A$:TEMPO 15:PLAY AB$
```

—JESSE B. BROWN, EUNICE, LA ■

Magic is the original *column of reader-submitted hints and tips. Each month we present brief, useful computer "tricks" to help you get the most out of your Commodore computing system—whether you're a beginning or advanced computerist, a C-64 or C-128 owner. Magic is a forum for* RUN*'s imaginative and inventive readers to share their programming tips, brief software or hardware modifications, shortcuts or items of general interest. If you have an idea to make computing easier, faster, more exciting and enjoyable, send it to:*

Magic
RUN Magazine
80 Elm St.
Peterborough, NH 03458

RUN *pays $10 to $40 for each trick accepted for publication in the column. A payment of $50 and a Magic Contributor T-shirt is awarded for the Trick of the Month. To be eligible, the Trick of the Month must be for the C-64 or the C-64 and C-128. Tricks for the C-128 only are not eligible for the Trick of the Month.*

If you'd like a copy of RUN*'s latest edition of the Magic Trick Writer's Guide, enclose a self-addressed, stamped business envelope with your request, and you'll receive a copy in two to three weeks.*

RUN it right: C-128

MEGA-MAGIC

Spice up your reports and impress your colleagues with professional-looking pie charts.

ULTRA HI-RES PIE CHARTS

I've added a pie-chart maker routine to *RUN*'s Ultra Hi-Res graphics program that appeared in the February and May 1986 issues. Listing 1, Ultra Hi-Res Pie Charts, works with version 1.1 of Ultra Hi-Res, which includes the @Fill and @HCopy commands.

To create a pie chart, boot up Ultra Hi-Res V1.1 and load and run the pie chart program. You'll be asked to give your chart a name, the number of sectors you want in the chart, the area of each sector as a percent of the entire circle and a short description of each sector to print in the legend area below the chart. The routine won't fill a sector with a pattern if it occupies an area less than 1.5 percent of the chart, so if you have more than one such sector, you might want to group them into an "other" category. Ⓡ

—CAMERON GOODAIR, KOOLAN ISLAND, W. AUSTRALIA

Listing 1. Ultra Hi-Res Pie Charts program.

```
1Ø REM ULTRA HIRES PIE CHARTS-CAMERON GOOD
   AIR                                  :REM*1Ø
2Ø POKE47,Ø:POKE48,68:CLR               :REM*194
3Ø BANK1:PRINTCHR$(27)"E":PRINT"{SHFT CLR}
   "                                    :REM*48
4Ø TRAP4ØØ:CM$="{23 CRSR DNs}":@TEXT
                                        :REM*196
5Ø FAST:PRINTCHR$(27)"U":PRINT"{CRSR DN}{3
    CTRL Is}{CRSR RT}NAME OF PIE CHART"
                                        :REM*23Ø
6Ø INPUT"{HOME}{2 CRSR DNs}{5 CTRL Is}{2 C
   RSR RTs}";N$                         :REM*58
7Ø PRINT"{SHFT CLR}"CM$"{3 CTRL Is}MAXIMUM
    OF 22 SECTORS PLEASE"               :REM*13Ø
8Ø INPUT"{HOME}{2 CRSR DNs}{3 CTRL Is} HOW
    MANY SECTORS";N                     :REM*238
9Ø IFN>22THENPRINTCHR$(15)"{HOME}"CM$"{3 C
   TRL Is}MAXIMUM OF 22 SECTORS PLEASE"CHR
   $(143):SLEEP5:GOTO7Ø                 :REM*66
1ØØ DIMA(N),C$(N),W$(N),H(N),T(N):Q=36Ø:R=
    6Ø:C=2.4:YD=16Ø:RN=57.296           :REM*58
11Ø PRINT"{SHFT CLR}";:H=INT(8Ø/N):V=H*4:C
   G=LEN(N$):CG=CG*8:CN$="{CRSR DN}":CO$=
   ""                                   :REM*126
12Ø FORI=1TON:PRINT"{3 CTRL Is}PERCENTAGE
   OF SECTOR" I:NEXTI                   :REM*18
13Ø PRINT"{HOME}"CM$"{3 CTRL Is}PERCENTAGE
    SO FAR"                             :REM*98
14Ø G=O:FORI=1TON:PRINT"{HOME}"CO$;:INPUT"
   {6 CTRL Is}";W$(I):A(I)=VAL(W$(I))
                                        :REM*128
15Ø G=G+A(I):PRINT"{HOME}"CM$"{5 CTRL Is}{
   2 CRSR RTs}"G"{CRSR LF}{5 SPACEs}";:CO
   $=CO$+CN$:NEXTI                      :REM*8Ø
16Ø IFG<>1ØØTHENPRINT"{HOME}"CM$CHR$(15)"{
   3 CTRL Is}THE TOTAL MUST = 1ØØ%{4 SPAC
   Es}"CHR$(143):SLEEP5:GOTO11Ø  :REM*182
17Ø PRINT"{SHFT CLR}{2 CTRL Is}{CRSR DN}A
   SHORT DISCRIPTION FOR SECTOR" :REM*244
18Ø PRINT"{HOME}"CM$"{3 CTRL Is}NO MORE TH
   AN"(H-1)"CHARACTERS":PRINT"{HOME}":FOR
   I=1TON                               :REM*84
```


http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

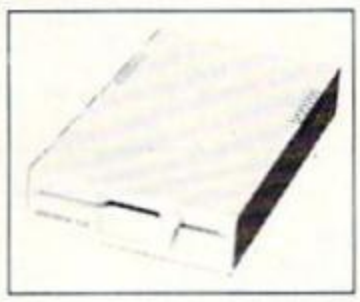
http://www.oldgamesitalia.net/

```
19Ø PRINT"{6 CTRL Is}"I;:INPUT C$(I)
                                        :REM*128
2ØØ IFLEN(C$(I))>(H-1)THENPRINT"{HOME}"CM$
    CHR$(15)"{3 CTRL Is}NO MORE THAN"(H-1)
    "CHARACTERS"CHR$(143):SLEEP5:GOTO18Ø:E
    LSE21Ø                              :REM*144
21Ø NEXTI:@GRAPHIC,Ø,2:@CLR,Ø           :REM*126
22Ø @DRAW,Ø,Ø,639,Ø,1:@DRAW,639,Ø,639,199,
    1:@DRAW,639,199,Ø,199,1:@DRAW,Ø,199,Ø,
    Ø,1                                 :REM*21Ø
23Ø X=319:Y=88:YR=R:XR=R*C:BANKØ        :REM*132
24Ø PRINT"{HOME}":@CHAR,53248,(32Ø-CG),3,1
    ,2,N$                               :REM*14Ø
25Ø @CIRCLE,1,X,Y,XR,YR                 :REM*176
26Ø @DRAW,X,Y,(X+XR),Y,1:BANK1:T=Ø:XD=Ø:S=
    Ø                                   :REM*77
27Ø YA=YD+16:X1=Ø:Y1=Ø:X9=XR-3:Y9=YR-3
                                        :REM*125
28Ø FORI=1TON:T=((A(I)/1ØØ)*36Ø):XA=XD+V
                                        :REM*149
29Ø S=T+S:IFT<2THENS1=S-1:ELSES1=S-3
                                        :REM*219
3ØØ X1=INT((COS(S/RN)*XR)+.5):Y1=INT((SIN(
    S/RN)*YR)+.5)                       :REM*161
31Ø XE=X+X1:YE=Y-Y1:XC=X+INT(COS(S1/RN)*X9
    ):YC=Y-INT(SIN(S1/RN)*Y9)           :REM*55
32Ø BANKØ:@DRAW,X,Y,XE,YE,1:BANK1       :REM*225
33Ø FORP=1TO8:READM(P):NEXTP:BANKØ:REM*253
34Ø @PAINT,XC,YC,1,M(1),M(2),M(3),M(4),M(5
    ),M(6),M(7),M(8)                    :REM*249
35Ø @BOX,XD,YD,XA,YA,1:BANK1:XF=XD+1:YF=YD
    +1:BANKØ                            :REM*1Ø3
36Ø @PAINT,XF,YF,1,M(1),M(2),M(3),M(4),M(5
    ),M(6),M(7),M(8)                    :REM*213
37Ø @CHAR,53248,XD,18Ø,1,1,C$(I)        :REM*155
38Ø BANK1:XD=XA+V:NEXTI:GETKEY A$       :REM*127
39Ø REM{3 SPACEs}@HCOPY,2,5             :REM*223
4ØØ @TEXT:HELP:PRINTCHR$(27)"S":PRINTCHR$(
    27)"F"                              :REM*51
41Ø REM FILL PATTERNS FOLLOW...         :REM*39
42Ø DATA255,255,255,255,255,255,255,255, 1
    28,192,224,24Ø,248,252,254,255:REM*137
43Ø DATAØ24,Ø24,Ø24,255,255,Ø24,Ø24,Ø24, 2
    31,231,231,ØØØ,ØØØ,231,231,231:REM*213
44Ø DATAØØØ,ØØØ,ØØØ,ØØØ,Ø85,17Ø,Ø85,17Ø, 1
    7Ø,Ø85,17Ø,Ø85,17Ø,Ø85,17Ø,Ø85 :REM*15
45Ø DATA129,195,1Ø2,Ø6Ø,Ø24,Ø6Ø,1Ø2,195, 2
    Ø4,2Ø4,2Ø4,2Ø4,2Ø4,2Ø4,2Ø4,2Ø4:REM*183
46Ø DATA254,252,248,24Ø,224,192,128,ØØØ, Ø
    8Ø,16Ø,Ø8Ø,16Ø,Ø8Ø,16Ø,Ø8Ø,16Ø:REM*111
47Ø DATAØØ3,ØØ6,Ø12,Ø24,Ø48,Ø96,192,128, 2
    55,255,ØØØ,ØØØ,255,255,ØØØ,ØØØ :REM*97
48Ø DATA252,249,243,231,2Ø7,159,Ø63,127, Ø
    24,Ø6Ø,126,255,255,126,Ø6Ø,Ø24:REM*159
49Ø DATAØØ1,ØØ3,ØØ7,Ø15,Ø31,Ø63,127,255, 1
    26,Ø6Ø,153,195,231,195,153,Ø6Ø :REM*61
5ØØ DATA127,Ø63,Ø31,Ø15,ØØ7,ØØ3,ØØ1,ØØØ, 1
    92,Ø96,Ø48,Ø24,Ø12,ØØ6,ØØ3,ØØ1 :REM*65
51Ø DATAØ51,153,2Ø4,1Ø2,Ø51,153,2Ø4,23Ø, Ø
    63,159,2Ø7,231,243,249,252,254 :REM*71
52Ø DATA255,255,255,255,ØØØ,ØØØ,ØØØ,ØØØ, 2
    Ø4,153,Ø51,1Ø2,2Ø4,153,Ø51,1Ø3:REM*46■
```


FSD-2

EXCELERATOR + PLUS

Commodore Compatible Disk Drive



Faster, Quieter, More Compact and More Reliable Than the 1541 & 1541C!

NOW ONLY $159

Guaranteed 100% Compatibility
It even enhances GEOS!

Full One-Year Warranty

Satisfaction Guaranteed

Fast Delivery

Advanced Direct Drive Technology
Comes Ready to Run and Works Smoothly with the Commodore 64, 64C, VIC 20, Plus 4, C 128 (in 64 mode) and 16.

CALL NOW TOLL-FREE
1-800-356-5178

ECI
Emerald Components International
Dept. R, P.O. Box 1441, Eugene, OR 97440
Customer Service: 503/683-1154

Circle 156 on Reader Service card.

PROF JONES
SUMMER/FALL 1987
ORDER LINE (208) 342-6939
THOROUGHBRED
GREYHOUND
HARNESS
LOTTERY/LOTTO
FOOTBALL
BASKETBALL
OFFICE HOURS
M-F 8 AM - 5 PM
SAT 9 AM - 1 PM
(Mountain Standard Time)
FREE CATALOG
1940 W. STATE
BOISE, IDAHO 83702
VISA
AMEX

PROFESSIONAL HANDICAPPING SYSTEMS

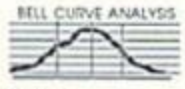
PROFESSIONAL SERIES ™
PROFESSIONAL HANDICAPPING TOOLS from PROF. JONES
The New PROFESSIONAL SERIES™ "Software for the Serious Handicapper"

• Mini-Pro Analysis™ $149.95
Complete race analysis for the sophisticated handicapper with single screen input, holding tanks to check entries, powerful use of 30 variables in data manipulation, complete "HELP" functions, and more.

• Analysis Module™ $249.95
Our comprehensive, full featured package contains **Mini-Pro Analysis** plus betting analyses, money managers, post position adjusters, fractional adjusters, multi-track abilities, watch lists, and on-screen betting philosophy.

• Multiple Regression Module™ $149.95
Using linear regression, this module regresses out factors relating to winning animals and then automatically recalculates the weighting formula as successive races are analyzed to derive the most precise formula possible, dramatically increasing win percentage!

NEW for 1987



PROFESSIONAL LOTTERY/LOTTO™ $149.95
Cutting edge analyses for the serious professional. Contains Bell Curve, Central Tendency, Cluster Analysis, and 17 Dimitrov Systems, for complete, high accuracy analysis of Lottery or Lotto.

Cumulative Stats
Last 4 weeks
Last 2 weeks
Previous Weeks?

Power Plays
Rams (49ers)
(Bears) Bills
(Vikings) Seahawks

PROFESSIONAL SERIES FOOTBALL™ $199.95
A flexible, high performance football analysis with complete built-in scheduling, excellent file capacity, single input for two teams, and high accuracy; contains predictors for team scores, over/under, non-bets, regular bets and superbets. The regression analysis is adjustable to give results based on any number of previous weeks.

BOOOKIE BUSTER™ FOOTBALL ANALYSIS $149.95
A high accuracy football analysis using 21 separate and structured analyses and a complete database of all NFL games from 1978 to 1986 to predict the spread winner.

Terms: Free shipping all software. Add $6.00 COD / $6.00 UPS Blue / $9.00 International delivery / ID residents add 5%. Allow 3 weeks when paid by personal check. Prices above are for cash or money order only. Add 3% for Visa, MasterCharge, and AMEX. Prices subject to change.

Many more programs available.
Call ***today*** *for a copy of our* ***FREE CATALOG!***

Circle 74 on Reader Service card.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

RUN CLASS ADS

ADULTS ONLY SOFTWARE for the Commodore 64/128

ALVA DATA Dept J6
28 Alva Street,
New Bedford, MA 02740
(check, M.O., MC/VISA)
(Add $2.00 shipping & handling.
Foreign orders Add $6.00)

THE LOVEGAME Interactive fantasy game for two or more intimate players. Amusing and suggestive trivia quiz format with provocative "Scoring" system! $24.95

STUD'S CHALLENGE A man's text adventure romp...The object of this game is to SCORE, figuring out how to please various types of women, and what turns them off. It takes all kinds!! $21.95

TIME TRAVELER

FIND OUT WHAT HAPPENED THE YEAR YOU WERE BORN!

Make MONEY with your computer. Sell printout at flea markets, malls, etc. Lists Academy Award & World Series winners, prices, presidents, headlines, the annual income, avg. cost of a home, calendar, etc. 1900-1986. Also includes TRIVIA game. Educational, entertaining. Send $39 for disk or $3 and a stamped self-addressed envelope, name and date of birth for a printout. Guaranteed. NOT COPY PROTECTED.

PRE-FORMATTED DISKS

Top quality DS/DD disks formatted on a 1541 for the 64. Ten disks minimum. $1.60 each or $1.70 if you specify ID numbers. 100% Certified.

NCI Nationwide Computer Industries, Dept. 52, 205 McCormick Avenue Hawkinsville, Georgia 31036. Visa/MC Phone 1-912-783-1158

SURVEYOR I

Triangulation: Horizontal & Vertical Curves,
STATIONING and PRINTOUT for both curves,
Misc., Volumes in Cu. Ft., Cu. Yds. & Gals.

SURVEYOR II*

Traverse Closure: Average End Volume: Single End Area
By Compass Rule & Coordinate Method
Dist, Bet, Coord, w/bearings: Angle Bet, Bearings: Etc.

R&R HISSA 9500 S.W. 51 TERR, MIAMI, FL 33165
C128 or C64 $24.95: PC $29.95: Postpaid: Fla. Res. Add 5% Tax Graphics Card required for PC: *Printer required for Surveyor II

Authorized Commodore Repair

C-64 $55.00 1541 Logic $65.00
All Drive Alignments $40.00
Recoton C-64 Power Supply Distributor, Retail $39.95
Dealer Inquiries Welcome
Call For Repair Prices On Other Equipment
Mail Order Repair Welcome
$5.00 Shipping Fee

ACTION COMPUTER, 11407 Emerald #109, Dallas, Texas 75229
(214) 484-7838

CW DATA-LABS **TISAR 128** *BUSINESS SOFTWARE*

REMARKABLE CUSTOMER DATA-BASE & INVOICE MANAGEMENT SYSTEM!
Designed for Service, sales/mktg, repair shops etc...
Write/Read/Print Customized Invoices & Records.
User Friendly Prompts guide you through each function.
Full Color * Stores 500 Records/Disk on 1571 Drive.
Track Sales or Job Status, Estimates, Dept. Codes, etc...
Search, Cross-search, Sort, Mailing labels, Graphs, much more...
80 Columns * Back-Up-Able * Full Documentation
* SPECIAL INTRODUCTORY OFFER *
Two Free Programs Included (CW Memo & CW Budget) $69.95
Same-day FREE shpg. MC/VISA or COD (please no checks.)
Call orders only * 24 hours * **1-800-537-LABS**
(Pa. customers add 6% sales tax call: 215-745-3780)
CW DATA-LABS, 1632 Napfle Ave., Philadelphia, PA 19111

MasterCard VISA

RUN Class Ads

RUN Class Ads were specifically designed to provide the effectiveness of display advertising at the cost of classified advertising. This opportunity gives the Class Ad buyer the lowest cost available to reach *RUN*'s highly qualified circulation of exclusive Commodore 64 & 128 owners.

Need help in designing your Class Ad, questions about rates, frequency or size? Call **HEATHER PAQUETTE at 1-800-441-4403 or 603-924-9471** or **BRENDA BILLHIMER in California at 415-328-3470.** We accept checks, money orders, Master Card or VISA.

BEAT THE POINT SPREAD!

Handicap NFL games against the point spread easily and profitably with your computer! Only 5 minutes/week & your local newpaper is needed to uncover hidden overlays in the betting line. A winning season of Best Bets is GUARANTEED or your MONEY BACK! $34.95 (+4.55 s&h). For Commodore 64 & 128 (no Amiga), and IBM & Compats. SAVE SHIPPING—Order by Mail.

GE RIDGE SERVICES, INC.
170 Broadway, Suite 201-R
New York, NY 10038
1-800-341-1950 Ext. 77
Write for free catalog.
Dealers/Inquiries **718-317-1961.**

PRO FOOTBALL ANALYST

Attention Subscribers

We occasionally make our mailing list available to other companies or organizations with products or services which we feel might be of interest to you. If you prefer that your name be deleted from such a list, please fill out the coupon below or affix a copy of your mailing label and mail it to:

CW Communications/Peterborough
RUN
PO Box 954
Farmingdale, NY 11737

Please delete my name from mailing lists sent to other companies or organizations. RUN

Name _____
Address _____
City _____ **State** _____ **Zip** _____

DEADLOCK Software

Deluxe BBS Construction Kit V7.1

The BBS that puts you in control. Very user friendly. 100% programmable menus. 300/1200 Baud. multi-drive, comprehensive file transfers, user activity log, color graphics capable, message bases, story boards, plus all the features you would expect in a great BBS system.

Orders: DEADLOCK SOFTWARE
205 Boston Ave. Mays Landing, NJ 08330
Or call Orders Only: 1-800-334-0854 ext. 827
(609) 653-4330 - Demo BBS (24 hrs; 300/1200) Please, no personal checks

$59.95

DISK DRIVE PROBLEMS?

115 VAC

Reduce misalignment caused by heat build up and keep dust from entering the disk loading opening with the Uni-Kool C-100 disk drive cooler. Designed to work with Commodore disk drive models 1540, 1541, and SFD 1001, the quiet C-100 flows cool, filtered air through the disk drive thus greatly increasing life while reducing maintenance.

Only $34.95 each plus $2.50 shipping & insurance
To order send money order, check or COD to:

Uni-Kool Division of UniMeasure, Inc.
7055 NW Grandview Dr.
Corvallis, OR 97330
503-757-3158

Model C-100E European 220 volt version, also available.

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

RUN CLASS ADS

EMED
MEDICAL DATABASE SYSTEM

for the C-64/128
28 Body Areas—325 Symptoms—460 Diseases

Performs diagnosis, XREF, diseases by symptom, XREF symptoms by disease, search & on-line help text. Send $29.95 + $2.00 for postage and handling to:

DMC SOFTWARE, Rt. 1 Box 364, Clinton, LA 70722

dealer inquiries welcome (504) 683-9897

USE YOUR PHOTOS
Slides or Drawings with Your C-64/128
PROGRAMS, BUSINESS REPORTS, SCHOOL PAPERS AND COMPUTER ART

YORE PHOTO™

Images digitized (in B/W) and returned on disk. **Include** the name of your **Graphics Program.** (Example: Print Shop, Side A.) Images cropped unless full frame specified. SEND COPIES; we cannot be responsible for loss or damage of materials. Minimum order—$15 for 3 images, $3 ea. additional image + $2 shipping/handling (CA res. add 6% sales tax). Foreign + $4.00 U.S. Send check or money order to:

YORE PHOTO™ Dept. C, PO Box 1269, 29 Palms, CA 92277
AMIGA owners—COLOR digitizing is available. **619-367-3779**

PERSONAL COMPUTER OWNERS

EARN $1000 TO $5000 MONTHLY

WORK AT HOME IN SPARE TIME
PERFORMING SIMPLE SERVICES WITH YOUR COMPUTER
FREE LIST OF 100 BEST SERVICES TO OFFER

WRITE A.I.M.F.P. P.O. BOX 60369 SAN DIEGO, CA. 92106

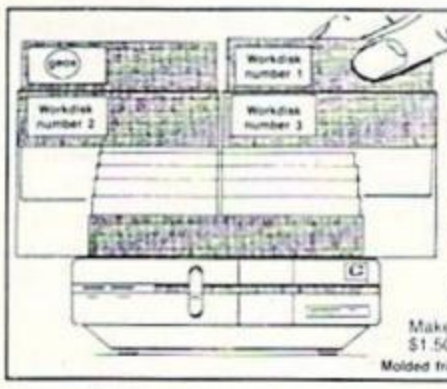
COMMODORE 64
FINEST PUBLIC DOMAIN PROGRAMS
• ON DISK • MOST $1.50 • ON DISK •
YOU PICK THE PROGRAMS THAT YOU WANT!!!

FOR YOUR OWN LIST AND DESCRIPTION OF THESE PROGRAMS SEND JUST A SASE TO:

JLH CO.
DEPT A
BOX 67021
TOPEKA, KS 66667

COMMODORE PARTS, SERVICE, DIAGNOSTIC EQUIPMENT & SOFTWARE

Need Parts or Service? We Have No Competition! Largest Parts Selection in the U.S.! The only experienced Commodore professionals you can trust! For years C.B.M. has been our only business and we have the know-how! Hundreds of satisfied customers: individuals, computer centers, N.A.S.A, U.S. Navy, Air Force, Educational Institutions & U.S. Government! Fast service—U.S. lowest prices for quality, professional service and upgrade (C-64 PCB repair only: $39.95) extended 1-2 year warranty available! No fooling—you'll get what you paid for and more. In stock: Diagnostic service equipment & software, original Commodore service manuals, Sam's "Computerfacts", improved power supply, hundreds of custom-made burn-in-tested quality parts, hard-to-find chips, Amiga ICs etc. Monthly special: new C.B.M. "bug-free" DOS ROMs FOR 1571 drive. C.B.M. latest 1531 datasette: free with any order! Call for details! 24-hour service! Catalog: $3.00 postpaid! **K. Boufal-Consulting Services, 244 Fitzwater St., Philadelphia, PA 19147, (215) 925-6469.**



DATASTAK
from Diskassist

Stacks as many as 12 disks vertically on graduated levels for quick, one hand access. Sleeves remain in the slots. A real timesaver when using multiple disks. Extra sleeves, double stick stabilizing tape, and instructions included.

To order mail your check or money order for $6.50 ea. + $2.25 s + h ($8.75 total) to: (no added s + h charge for 2nd DATASTAK)

Diskassist
4909 Daniel Dr.
Crystal Lake, IL 60014

Make checks payable to Diskassist. Canadian orders add $1.50. We ship promptly via UPS when possible.
Molded from durable transparent plastic. Return for refund if not satisfied.

image 3™

the 3D graphics program
C-64 + 1541. Draws dots, lines and fills in mono or stereo with 3D glasses. Rotate image. Teach function. Over 50 commands. Call toll free 800-872-4502 (OH 800-872-4002) or send check or M.O. for $59.95 + $5.00 handling to:

MICRO DEVELOPMENT CO.
P.O. Box 5872
Cleveland, Ohio 44101

OH residents add 6.5% sales tax

FREE SOFTWARE

1000's of PROGRAMS available (including games, business, modem, utilities and application programs) from the **PUBLIC DOMAIN USERS GROUP** for the **C-64, C-128** (plus **CP/M PROGRAMS FOR THE C-128), IBM** and **CP/M** computers. **PDUG**, established in 1982, is one of the oldest and largest users groups, with over 10,000 members worldwide.

SPECIAL OFFER—Send $10 today and receive not only our 1 year membership, but also our new members' disk, containing 21 great programs. Or for more info, send a stamped addressed return envelope (specify computer) to:

PUBLIC DOMAIN USERS GROUP, PO Box 1442-N1, Orange Park, FL 32067

COMMODORE 64/128

ULTIMATE VCR TITLING PROGRAM—FOUR FONTS—CENTERIZES—NO CAMERA—COLOR —GRAPHICS—PICTURES—ANY SIZE— $34.95 DISK ONLY—LEO'S VIDEO— RR1 BOX 161A, TEMPLETON, MA. 01468
SAVE & RECALL YOUR TITLES TO DISK

commodore

plus/4 AND 128 SOFTWARE

$19.95 per disk

Games, (logic, puzzles, battle) educational, (math, geography, vocabulary), finance & statistics and trivia. Write for catalog.

Cardinal Software 14840 Build America Dr., Woodbridge, VA 22191 (703) 491-6494

Print Master Graphics Converter Print Shop

Automatically convert **Print Master** graphics to **Print Shop** graphics • Or convert **Print Shop** graphics to **Print Master** graphics • Supports 1 or 2 disk drives 1541/1571 • $19.95 + S & H

ORDER TOLL FREE (10-6 MON. SAT.
800-762-5645

Cardinal Software 14840 Build America Dr., Woodbridge, VA 22191
Info: (703) 491-6494

Print Shop is a ® of Broderbund Software, Print Master is a ® of Unison World, Inc.

WIN LOTTO MILLIONS!!!

New! Lotto Picker™ Plus lets you store winning Lotto & pick 3/4 numbers & choose 1 of 3 statistical modes (unbiased, 'hot', or 'due') to select what might be your winning million $ numbers! All U.S. & Canadian games included. Never Obsolete! For Commodore 64 & 128 (no Amiga). $34.95 + 4.55 shipping and handling. **Save shipping charges. Order by Mail:**
GE RIDGE SERVICES, INC. 170 Broadway, Suite 201-R New York, N.Y. 10038 or Call **1-800-341-1950 ext 77** WRITE for FREE catalog. Inquiries/Dealers 1-718-317-1961

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

AUGUST

COMING ATTRACTIONS

Word processors for the C-64 and C-128 are more sophisticated than ever, and many are now integrated with spreadsheets and databases. In our July issue, we'll take a look at the burgeoning power of these most popular of applications programs.

GETTING STARTED WITH CP/M—
Is CP/M "the forgotten mode" on your C-128, because you think it's too hard to learn? With the instructions in this introductory tutorial, you can bring CP/M into the limelight and start exploring its vast world of software.

DATAFILE ENHANCEMENT—
Now, users of *RUN*'s Datafile 3.6 database for the C-64 can restructure their files without reentering all the data. The next time you create a file and forget to include a field, DFClone will save the day!

GEOS COLUMN—
GEOS is a rising star on the Commodore scene, and, beginning in August, *RUN* will devote a monthly column to it. We'll review the latest GEOS applications and updates, answer readers' questions and generally show you how to take full advantage of this new operating system.

KEYCODES ON REVIEW—
If you're forever hassled by the chore of looking up ASCII and screen codes for the C-64 keys when you're programming, you'll love Keycodes, a utility that displays these values on the screen—directly from Program mode.

LIST OF ADVERTISERS

ADVERTISING SALES:
East Coast Sales: Steve Robbins; Ken Blakeman;
Nancy Potter-Thompson (603) 924-7138 or (800) 441-4403;
West Coast Sales: Giorgio Saluti (415) 328-3470

Reader Service		Page
8	Abacus Software	27
188	ActionSoft	2, 3
5	Activision	9
79	Aprotek	65
134	Berkeley Softworks	1
73	Briwall	58
*	C.O.M.B.	63
192	Cardinal Software	91
64	CompuServe	II
274	Computer Friends	6
*	Crown Custom Covers	18
50	Data Fast USA	33
128	Digital Vision	67
3	Electronic Arts	13
11	Emerald Components	23
156	Emerald Components	93
190	First America Distributing	15
144	Free Spirit Software	24
*	GE Information Services	III
126	Ketek	25
*	Lyco Computer	30, 31
103	Micro Prose Software	19
207	MicroComputer Services	54, 55
91	Micrologic Corp.	48
51	Mikrontronics	59
98	Montgomery Grant	61
48	Patech Software	35
74	Prof. Jones	93
93	Professional Software, Inc.	IV
223	Pro-Tech-Tronics	68, 69
201	Pro-Tech-Tronics	70, 71
15	Protecto Enterprizes	36, 37
	RUN	
	Class Ads	94, 95
	ReRun Subscription Ad	49
220	Quinsept	6
*	S & S Wholesalers	20, 21
102	Soft-Byte	6
254	Software Discounters of America	73
92	Star Micronics	34
194	Superior Micro Systems	18
155	Tenex Computer Express	77
209	Tussey Computer	10, 11
76	Uptime	7
187	Utilities Unlimited	57
*	Value Soft	43
54	World of Commodore	67
96	Xetec, Inc.	18

For further information from our advertisers, circle the corresponding Reader Service number on the Reader Service card.

*This advertiser prefers to be contacted directly.

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

RUN ALERT

As a service to its readers, *RUN* will periodically publish the names of companies who are having difficulties meeting their customer obligations or who have gone out of business. Readers are advised to contact *RUN* before dealing with this company: **White House Computer**. If you have any questions or concerns about advertisers in *RUN*, please contact:

Barbara Harris, Customer Service
***RUN* Magazine**
80 Elm St.
Peterborough, NH 03458
603-924-9471

RUN is a publication of CW Communications/Peterborough, a division of IDG Communications, the world's largest publisher of computer-related information. IDG Communications publishes over 80 computer publications in more than 28 major countries. Fourteen million people read one or more of IDG Communications' publications each month. IDG Communications publications contribute to the *IDG News Service* offering the latest domestic and international computer news. IDG Communications publications include: ARGENTINA'S *Computerworld Argentina, PC Mundo*; ASIA'S *Asian Computerworld, Communications World*; AUSTRALIA'S *Computerworld Australia, Communications World, Australian PC World, Australian Macworld*; AUSTRIA'S *Computerwelt Oesterreich*; BRAZIL'S *DataNews, PC Mundo*; CHILE'S *Informatica, Computacion Personal*; DENMARK'S *Computerworld Danmark, PC World Danmark*; FINLAND'S *Tietoviikko, Mikro*; FRANCE'S *Le Monde Informatique, Distributique, InfoPC, PC Hebdo, L.M. Telecoms*; GREECE'S *Macro and Computer Age*; HUNGARY'S *Computerworld SZT, Mikrovilag Tudomany*; INDIA'S *Dataquest*; ISRAEL'S *People & Computers Weekly, People & Computers Monthly*; ITALY'S *Computerworld Italia*; JAPAN'S *Computerworld Japan*; MEXICO'S *Computerworld Mexico, Compumundo*; THE NETHERLANDS' *Computerworld Netherlands, PC World Netherlands*; NEW ZEALAND'S *Computerworld New Zealand*; NORWAY'S *Computerworld Norge, PC World Norge*; PEOPLE'S REPUBLIC OF CHINA'S *China Computerworld, China Computerworld Monthly*; SAUDI ARABIA'S *Arabian Computer News*; SOUTH KOREA'S *Electronic Times/Computerworld, PC World*; SPAIN'S *Computerworld Espana, Commodore World, PC World Espana, Communicaciones World, Informatica Industria*; SWEDEN'S *Computer Sweden, Mikrodatorn, Svenska PC World*; SWITZERLAND'S *Computerworld Schweiz*; UNITED KINGDOM'S *Computer News, DEC Today, ICL Today, PC Business World, Lotus UK*; UNITED STATES' *AmigaWorld, Boston Computer News, CD-ROM, Computerworld, Computers in Science, Digital News, Federal Computer Week, 80 Micro, FOCUS Publications, inCider, InfoWorld, Mac World, Micro Marketworld, Network World, PC World, Portable Computer Review, Publish!, PC Resource, RUN*; VENEZUELA'S *Computerworld Venezuela*; WEST GERMANY'S *Computerwoche, PC Welt, Run, Information Management, PC Woche*.

http://www.oldgamesitalia.net/ http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

"Ordinary online services left me flat..."

$10.00+ per hour

"With GEnie™ I discovered vast new horizons."

$5 per hour

There's only so far you can go with most ordinary online information networks. But with GEnie—the General Electric Network for Information Exchange—there's virtually no end to the exciting new interests you can explore. Discover the value of GEnie's vast range of services and explore new territory with guides from our Special Interest Groups.

Join the friendly crew with GEnie's "Flagship" Commodore† ***RoundTable™ Special Interest Group*** for exciting and informative discussions. Benefit from the expertise of experienced individuals. Compare notes on hardware, software, games or any other topic you choose. And, for the simple cost of downloading, collect thousands of valuable public domain software programs for your personal computer. Over 1000 new programs are added to our libraries every month. And remember, UPLOADS ARE FREE on GEnie!

No extra charge for 1200 Baud.

Make new friends, schedule meetings, gather facts and figures, set up travel plans, get the news, be entertained and even shop online for a fraction of what other information services charge, because GEnie's non-prime rate for 300 or 1200 baud is only $5 an hour. GEnie always comes out ahead of the competition in savings, in some cases by as much as 60%.

You get even more for your money.

In addition to user support groups, you can meet new people with ***GEnie's Live Wire™ CB Simulator.*** Exchange messages with ***electronic mail*** service. Find the best vacation deals and make your reservations with ***American Airlines travel service.*** Shop at home with ***American Express Merchandise Shop.*** Learn the fun way with a subscription to ***Grolier's electronic encyclopedia.*** Play classic and ***multiplayer games.*** Use GEnie's ***Financial Services*** to track stock market quotes, check market indicators and maintain an automatically updated personal portfolio online. All this ***plus*** new services added each and every month!

Map out your own voyage of discovery with GEnie as your guide...enrich your tomorrows by signing on with GEnie today.

Backed in the GE Tradition

GEnie is brought to you by General Electric, whose reputation is built on attention to detail and customer satisfaction. We're continuing that tradition with GEnie.

Compare & Save*	Services						Pricing			
	Travel & Shopping	SIGs/User Groups	CB & Mail	Financial Services	News	Games	Registration Fee	Monthly Minimum	Non-prime time rates 300 baud	Non-prime time rates 1200 baud
The Source	X	X	X	X	X	X	$49.95	$10.00	$8.40	$10.80
CompuServe	X	X	X	X	X	X	$39.95	none	$6.00	$12.50
GEnie†	**X**	**X**	**X**	**X**	**X**	**X**	**$18.00**	**none**	**$5.00**	**$5.00**

*Basic rates and services shown in effect 2/87. †Non-prime time applies Mon.–Fri., 6pm–8am local time, all day Sat., Sun., and nat'l holidays. Subject to service availability. Additional charges apply for 2400 baud and financial services.

Sign up from your keyboard today.
4 Easy Steps:

1. Have your major credit card or checking account number ready.
2. Set your modem for local echo (half duplex)—300 or 1200 baud.
3. Dial **1-800-638-8369.** When connected, enter HHH
4. At the U# = prompt enter **XJM11882,GEnie** then RETURN.

Need help or more information? No modem yet? We can help. In U.S. or Canada call **1-800-638-9636.**

GEnie™

Stay online longer, for less.

INFORMATION SERVICES

General Electric Information Services Company, USA

GEnie rates and services subject to change. Uploads are free during non-prime hours at 300 or 1200 baud. Some services offered on Genie may include additional charges.

† *Commodore is a registered trademark of Commodore Business Machines*

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

http://www.oldgamesitalia.net/

GIVE YOUR COMMODORE A FLEET TO COMMAND!

"A" Rating.
– Run Magazine, March, 1987.

Fleet System 2+ and 4 are powerful, easy to use and inexpensive. Both Fleet System 2+ for your Commodore 64 and Fleet System 4 for your Commodore 128 include an Integrated Dictionary and Thesaurus.

The 90,000 Word Dictionary is the largest and fastest available for the C64/128 and will spell check a ten page document in just 45 seconds. There's even room for an additional 10,000 "Custom" words! The Integrated Thesaurus provides thousands of synonyms ("like" words) and antonyms ("opposite" words) instantly!

Fleet System 2+ and 4 have many other attractive features such as: Extra Text Areas, Mail Merge, Preview Function and the ability to Insert, Delete and Move Text easily.

Now Fleet System 2+ and 4 are easier to use than ever!

You'll find it much easier to use your C64 with such Fleet System 2+ features as: Pop-Down Menus for easy access to all functions, Ability to *Cut and Paste* by words, sentences or paragraphs, Built-in Disk Utilities and enhanced printer support.

If you are a C128 user, Fleet System 4 offers such powerful features as: Help Screens, Ram-Expansion Support, and On-Screen Bold and Underline in Preview to Screen.

Fleet Filer with Fleet System 2+ and 4 at no extra cost!

Fleet Filer is a super-fast, menu-driven database that handles up to 5,000 records and 20 text or numeric fields. In addition, Fleet Filer will sort records and input/output information to Fleet System 2+, 4 and most major word processors. Fleet Filer can also be purchased separately for only $39,95.

For more information, or the name of the dealer nearest you call: ***1-800-343-4074.***

PSI

Professional Software, Inc.
51 Fremont Street
Needham, MA 02194
(617) 444-5224

Fleet System 2+, 4 and Fleet Filer are designed and written by Visiontronics Group Inc.
Commodre 64 and 128 are registered trademarks of Commodore Electronics Ltd.

Circle 93 on Reader Service card.

http://www.oldgamesitalia.net/
http://www.oldgamesitalia.net/